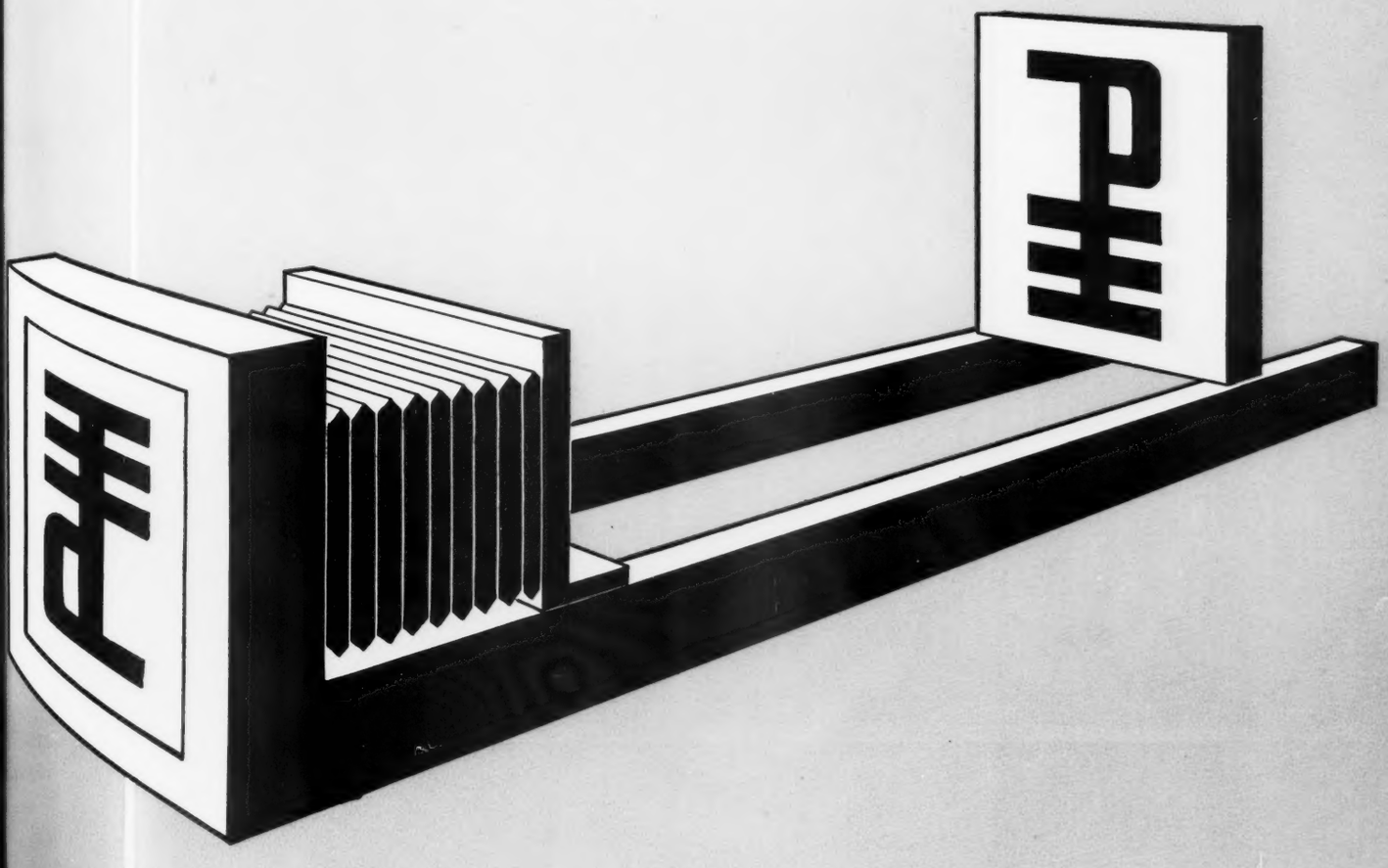
MAY 1951

PLEASE ROUTE THIS COPY TO	
Manager	Pressroom F'm'n
Production Mgr.	Bindery F'm'n
Plant Supt.	Mailing F'm'n
Platemaking F'm'n	Maintenance Supt.
Composing F'm'n	Purchasing Agt.
For filing, please return to	

PRINTING EQUIPMENT

Engineer



AN INDUSTRY-WIDE TECHNICAL PUBLICATION

speed

The SPERRY 1000 roto printer

speed . . . The Sperry 1000 is daily establishing new standards for high-speed rotogravure printing of Publication Inserts . . . Folding Cartons . . . Wrappers . . . Labels.

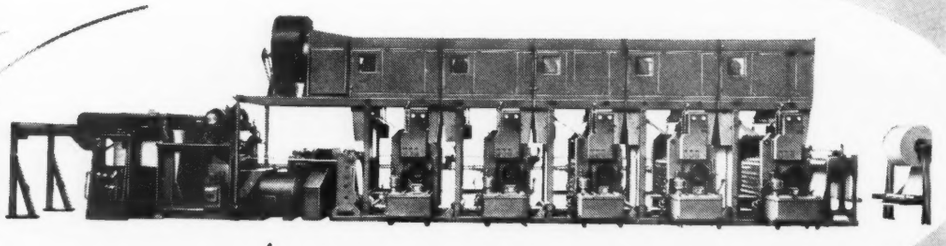
Still more important is the Sperry 1000's Speed in Makeready Changeover.

The color units, designed for lightning-fast changeover, permit removal of intaglio cylinder, ink applicator system and enclosure as an integral assembly on a roll-a-way carriage. A previously prepared replacement can be rolled into the color unit in a matter of seconds.

Ink sumps, complete self-contained units, roll into position and latch on to color units without complex pipe couplings.

And the Doctor Blade can be replaced in a matter of seconds by removing only two set screws.

That's all that is required—Costly delays resulting from lengthy Makeready Changeover are eliminated when you use the Sperry 1000.



SPECIFICATIONS:

- Width: 26" to 42"
- Circumference (Maximum) 46"
- High Speed: Designed to run at 1,000 ft./min.
- Heavy Duty: Rugged construction for continuous operation —built to the standards of a full farm publication press

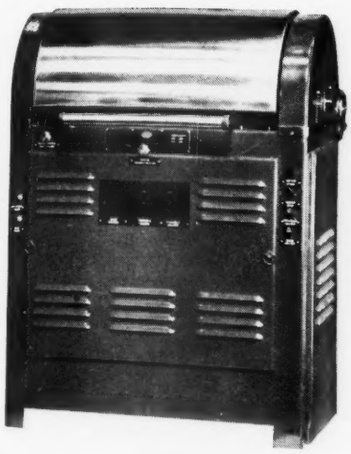
For complete information, please write to:

FORD INSTRUMENT COMPANY

Division of The Sperry Corporation
31-10 Thomson Avenue
Long Island City 1, N. Y.

FORD

here's what progressive newspapers think of the Sta-Hi Master Former!



STA-HI

Master Former

● "We have had our STA-HI Master Former in operation now for several months and to put it lightly, we think it is a *marvelous piece of stereotyping equipment; no buckles or make-overs.* It has 'pushed up' our printing far above our anticipation. We certainly are not sorry in adding the STA-HI to our stereotype equipment."

G. L. Shehorn, Plant Superintendent
Boone, Iowa, *News-Republican*

● "We are happy to say our STA-HI Master Former is working satisfactorily. We like the machine very much and believe we are now doing *our best printing in 20 years* as a result of STA-HI and other changes and improvements made in our press and stereotype departments."

Howard A. Quirt, Editor & Publisher
Marshfield Wisc., *News-Herald*

● "Relative to the performance of our second STA-HI Master Former it is pleasing to be able to report that the machine is working very satisfactorily. Now that we have *two* of the new Formers we feel *adequately prepared for any load* we are asked to handle."

Jack T. Snyder, Business Manager
Gary, Ind., *Post-Tribune*

● "We have just put our STA-HI Master Former in use. We have not had one on this paper before and so far are very pleased with the results. We believe that it not only *improves the printing quality* but *eliminates a great many of the sinks* we used to have under our old system."

J. W. Dickey, General Manager
Ft. Lauderdale, Fla., *News*

● "We are very well satisfied with the STA-HI Master Former. Ever since it has been in operation this *time and labour saving equipment* has given us the most efficient service that anyone could expect."

Gaston Quessy, Treasurer
Ottawa, Canada, *Le Droit*

● "We noticed at once a *very decided improvement in our print*. The improvement in particular was noted in the solids; they were very much denser. Then *our cuts were clearer and better*. In fact this STA-HI Master Former has *contributed more to the improvement of our print* than anything we have tried in a long time."

F. W. Forney, Press-Stereo. Supt.
Colorado Springs, Colo., *Gazette-Telegraph*

Sta-Hi Corporation

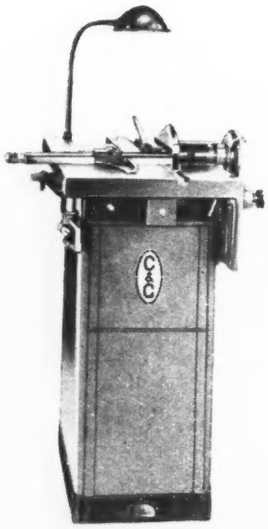
"SUPERIOR NEWSPAPER PRODUCTION MACHINERY"

235 W. WASHINGTON BOULEVARD ● BOX 152, WHITTIER, CALIFORNIA

Composing Room Efficiency Centers on your SAW TRIMMER

MORRISON SAW TRIMMERS

Cut Working Space in Half



You need 50% LESS WORKING SPACE with a MORRISON Saw Trimmer! That's because the Morrison work table is stationary. You move the work—instead of the entire table top. This is easier, too, and you don't need extra "overhang" space in front and in back of the saw. Even on wide work, you have the 135 pica Extension Gauge that swings down and out of the way when not in use. Where you want to crowd more production capacity into limited floor space, this space-saving feature is important and valuable. It's just one more advantage that makes the MORRISON your best buy in Saw Trimmers.

These features make the MORRISON your best buy in work-savers:

- "Behind the Gauge" Workholder.
- Miter Gauge with *point* adjustment.
- Right and left hand mitering, all miters face up.
- Miter and lineup gauge.
- Any-Angle Gauge.
- Universal Saw Blade and Saw Grinding Attachment.
- Automatic Index for plate cutting and trimming positions.
- Swing-out 135 pica Extension Gauge.
- Requires 50% less working space.

There's a MORRISON owner in your vicinity. Write for his name. See and try it —prove it yourself. Or write for folder "Essential to Composing Room Economy."

Get **MORE FOR YOUR MONEY** *in Saw Trimmers...* **BUY A MORRISON**

Model 3-A Saw Trimmer

Amazingly versatile. Table, 30" x 18". Smaller Model 45, with 18"x 27" table, has "Pistol Grip" saw blade adjustment. Low cost Model "45 Special" available for small plant or auxiliary use.

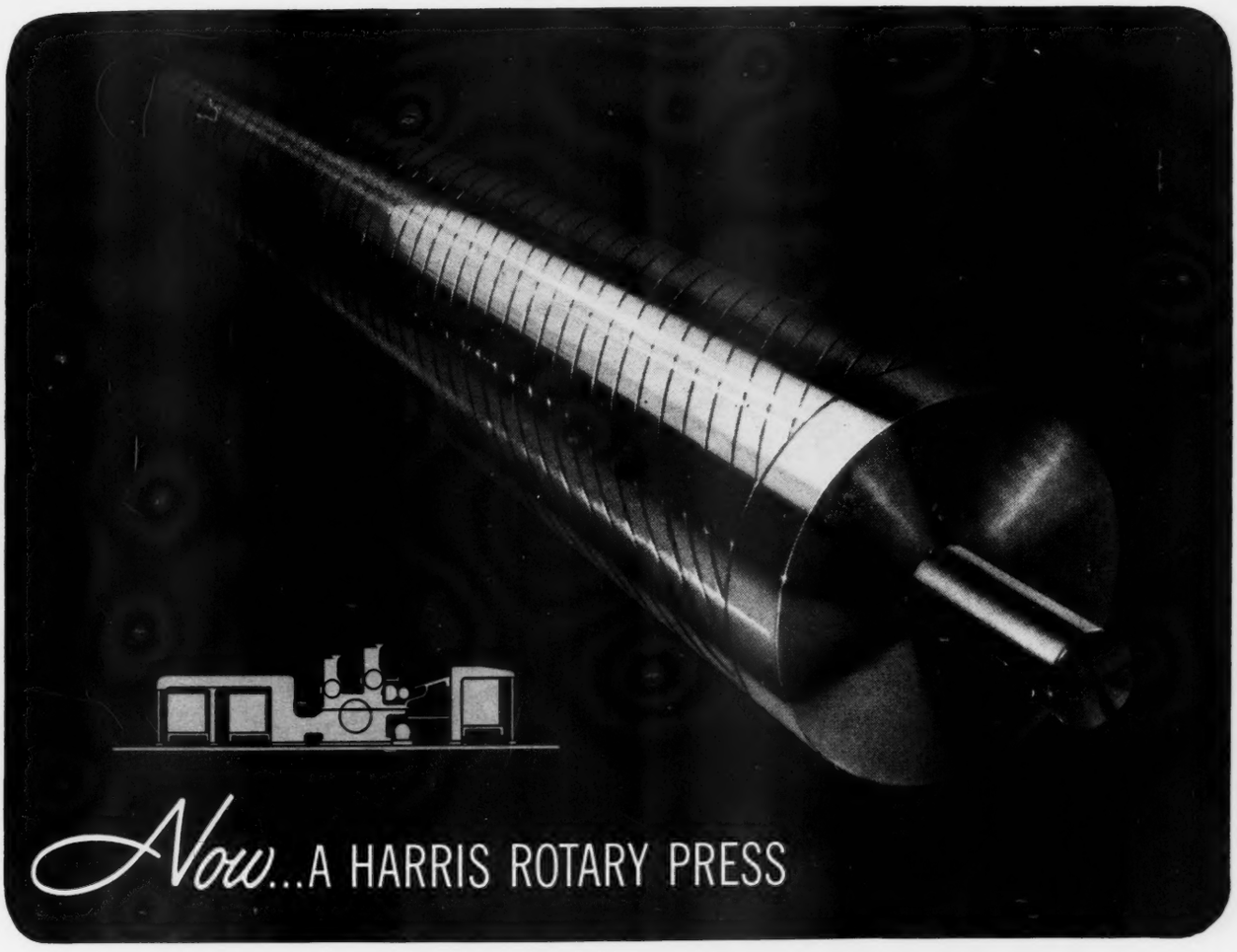
Symbol of Operating Economy

THE MORRISON COMPANY MILWAUKEE WIS.

THE *Morrison* COMPANY

PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

125 W. Melvina Street, Milwaukee 12, Wisconsin



with PLATE CYLINDERS *for standard plate sizes*

This press was designed to take plates made with existing, precision platemaking equipment. It requires no additional investment in special machines.

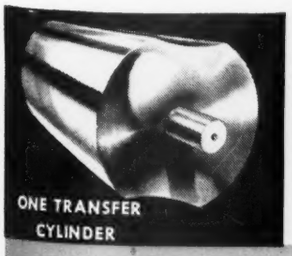
That's just another example of the sensible press engineering that went into this new two-color 45 x 65″ rotary letterpress.

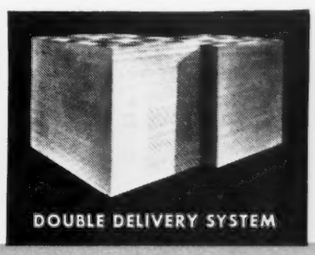
For instance, 5 *form rollers* on each color unit assure smooth, even coverage on the most difficult solids. *A single cylinder* between units, with the transfer grippers making only one grip and one release, protects register and prevents damage to sheets.

The *double delivery* system permits sheets to be fed to either of two piles or alternately to both. This allows a pile to be unloaded without stopping the press. It can give twice as much drying time. Harris *feed roll* register system gives positive control of front register without damage to the sheet.

Printing can be made more profitable. May we discuss how this new rotary press might increase your production?

HARRIS-SEYBOLD COMPANY
GENERAL OFFICES, DEPT. G, CLEVELAND 5, OHIO





CHECK THESE FEATURES WITH THE MEN WHO USE THEM

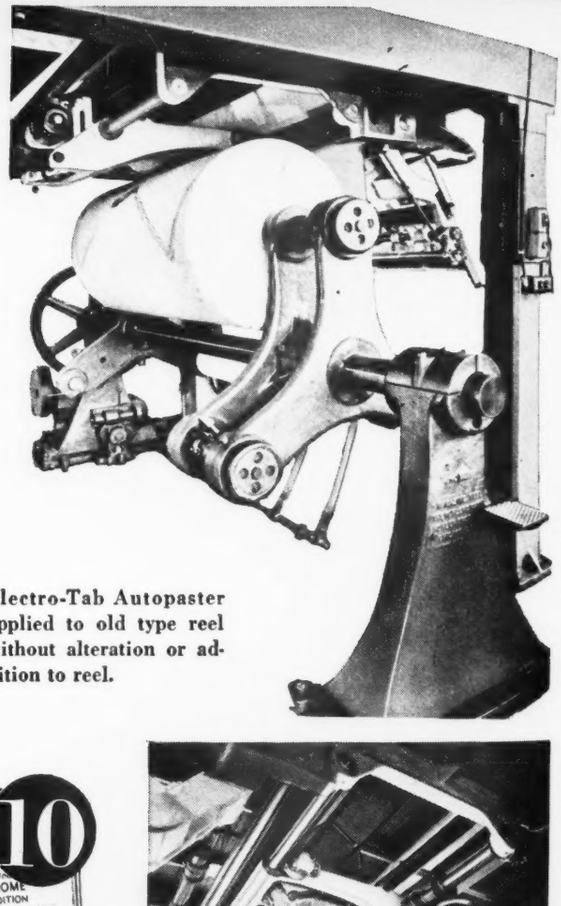
18 More Reels, Tensions and Electro-Tab Autopasters...

TO BE INSTALLED!

When this WOOD equipment is installed at the Toledo (Ohio) Blade and Times,and the Atlanta (Georgia) Journal and Constitution, it will mean a sharp reduction in their pressroom down-time . . . and a substantial increase in their daily production.

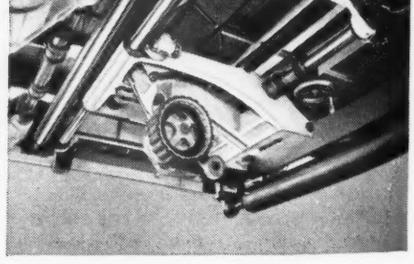
For any newspaper wanting similar benefits, this full speed web splicing equipment represents the best investment!

Complete with brush arm, knife and timing device, the Electro-Tab Autopaster can quickly and inexpensively be installed on the substructure of *any* press, over *any* make reel.



Electro-Tab Autopaster applied to old type reel without alteration or addition to reel.

TOLEDO BLADE
The Toledo Times
THE ATLANTA CONSTITUTION
The Atlanta Journal
8
10
M'Grath Asks for Tighter Lie Law
He and Hoover Oppose Crime Commission Idea
20 INJURED IN BUS CRASH NEAR ALBANY
WELFARE PROBER CALLED INELIGIBLE
Atlanta's Easter Parade of Flowers
Halt in Draft, Start of UMT Soon Next Year



Electro-Tab's speed-up device . . . a rubber covered wheel . . . brings speed of new paper roll up to web speed. Timing device holds both speeds in exact balance until splice is made.

IF IT'S Wood IT'S GOOD

WRITE OR CALL THE WOOD OFFICES FOR DETAILED INFORMATION

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17

PRINTING EQUIPMENT *Engineer*

AN INDUSTRY-WIDE TECHNICAL PUBLICATION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

EDITORIAL STAFF

MacD. SINCLAIR, Editor

ADAM HENRY REISER
Associate Editor

EDWARD H. OWEN
Assistant Editor

BUSINESS STAFF

DON WILL, Publisher

William L. Osborn, Eastern Manager, 1712 Grand Central Terminal, New York 17, N. Y. Phone: MUrray Hill 6-5980.

Eugene A. Powers, Midwest Manager, 612 N. Michigan Ave., Chicago 11, Ill. Phone: SUperior 7-2444.

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MAINTAINS PRESSROOM SCHEDULES

Photograph: Washington Post.

...with SCOTT "EXTRA HIGH SPEED" PRESSES

NEWSMEN all—management, mechanical supervisors, foremen, and operators at this world famous Washington Daily are enthusiastic about SCOTT PRESSES.

Pressmen . . . like the way SCOTT PRESSES "Operate." **The Washington Post Scott press job includes a wide variety of exclusive operating features that appeal to the "press gang."**

Large archways permit easy (man-sized) entrance into each working unit from both the gear and drive sides so that all parts are readily accessible and adjustments can be made quickly.

The Scott ink distribution system is entirely free of "wiping" contacts.

The Washington Post installation of 24 Scott "Extra High-Speed" units, comprises 16 black and white units, 8 color units, and 4 pair of the world famous 3 to 2 ratio, Scott "Extra High-Speed" folders.

Speed, is essential to NEWS, **and SCOTT "Extra High-Speed" Press Units and Folders are "the fastest in the world—bar none."**

Economy is as important as speed **— Scott equipment provides economy coupled with dependable speed, giving low-maintenance printing long after the initial cost is forgotten.**

Modernizing . . . Expanding . . . Planning a new plant . . . Consult SCOTT on the fastest, most versatile newspaper press equipment ever developed.

Literature available *Buy with Confidence . . . Buy* **SCOTT** 15-1-5

WALTER SCOTT & CO. INC.

PLAINFIELD, NEW JERSEY

it's the same story from every new

VERTICAL

user

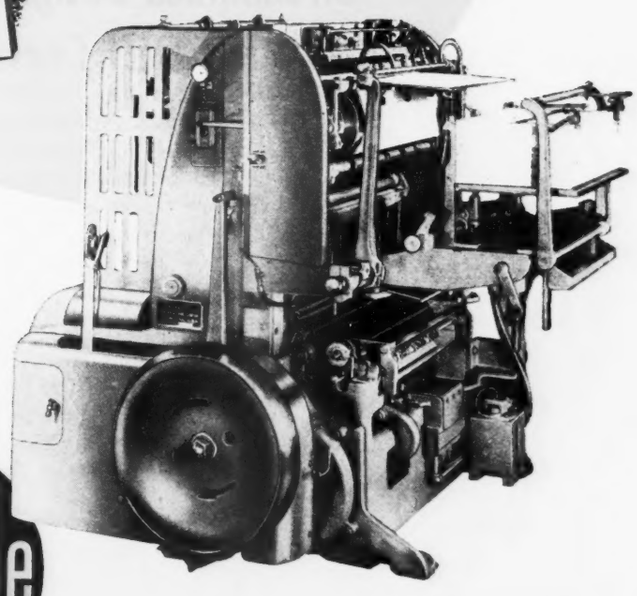
a

VERTICAL

will pay for itself

The new Miehle V-50 Vertical will handle more than 90 per cent of all the jobs done in the average printing plant! Its simple makeready, easy washup and quick changeover between jobs cuts down-time to a minimum—and the *increased* profit from this *greatly increased* production pays for the press.

For more information on improvements and basic features of the new high-speed V-50 Vertical, write for Brochure No. 1007.



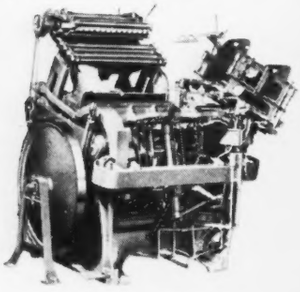
the Miehle

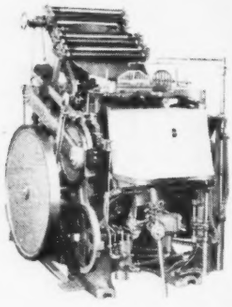
MIEHLE PRINTING PRESS AND MANUFACTURING CO.

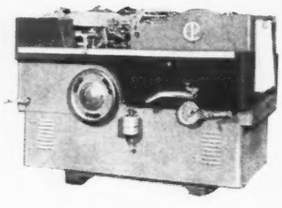
World's Largest Builder of Sheet Fed Presses

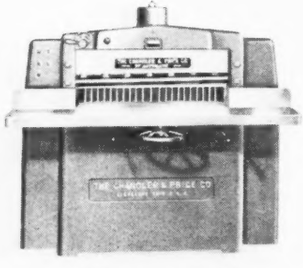
CHICAGO 8, ILLINOIS

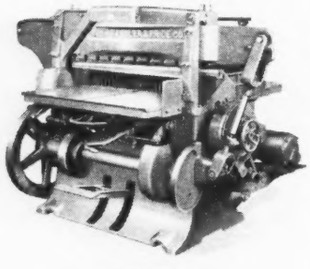
Protect Your Profits with Chandler & Price Equipment

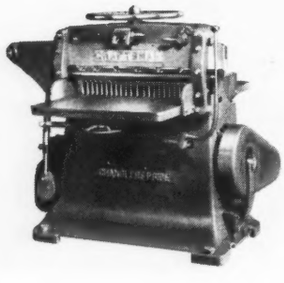


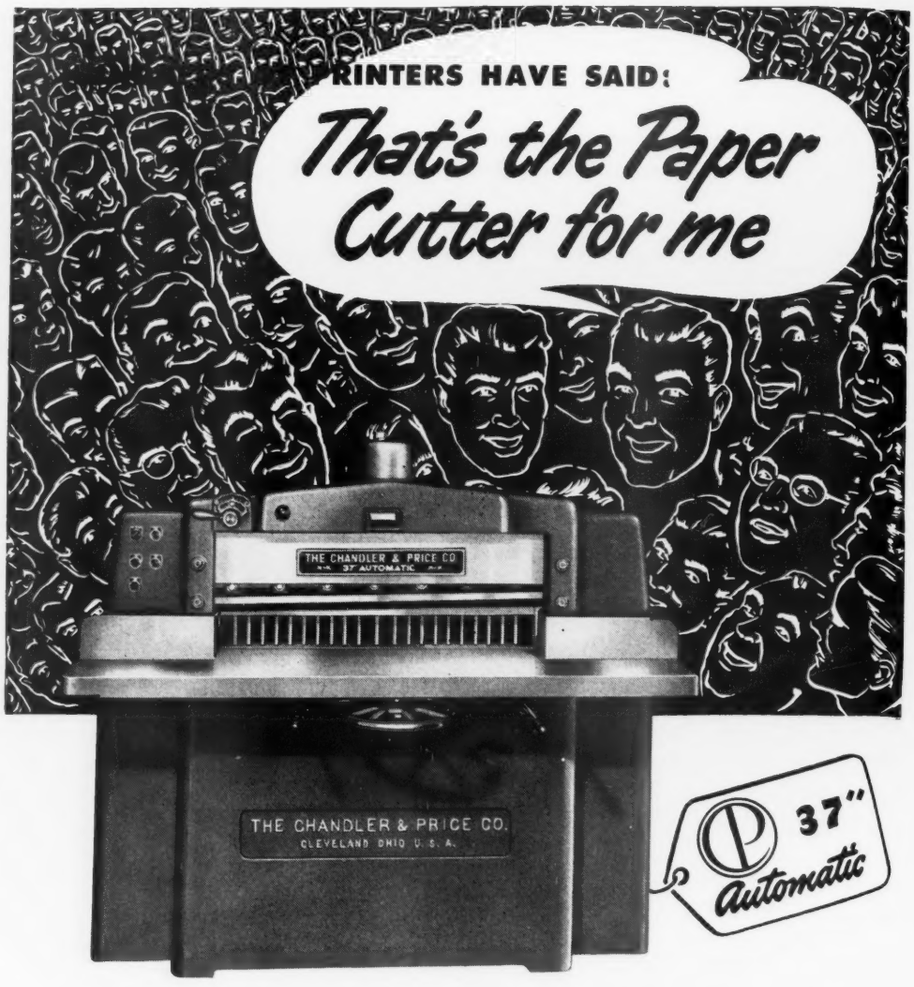











PRINTERS HAVE SAID:
That's the Paper Cutter for me
THE CHANDLER & PRICE CO.
37" AUTOMATIC
THE CHANDLER & PRICE CO.
CLEVELAND OHIO U. S. A.
37" Automatic

Streamlined Design... Fast, Accurate Cutting... Easy Electrical Control... Packaged Power Unit

● From the first day of its introduction a few months ago, the Chandler & Price 37" Automatic cutter has had wide acclaim from cutter users as: "This is the kind of cutter I've always wanted!"

Truly remarkable in its fast, easy action, this automatic cutter provides many unequaled features in cutter operation. The power unit is complete in itself—"packaged power." Electrical controls for fully automatic or semi-automatic operation are grouped conveniently at the left of the machine. Binder clamp is directly driven by a separate motor independent of knife bar drive.

Integrated, fool-proof non-repeat devices and two-hand cutting control insure safe, speedy, accurate cutting.

The full length extension tables as standard equipment and the wide 37" cut with a 37¼" length of cutting table behind the knife provide ample space for jogging and cutting the stock.

For more details of the superior operating advantages and cutting qualities of this machine, write for the illustrated folder, "C&P 37" Automatic Paper Cutter.

THE CHANDLER & PRICE COMPANY

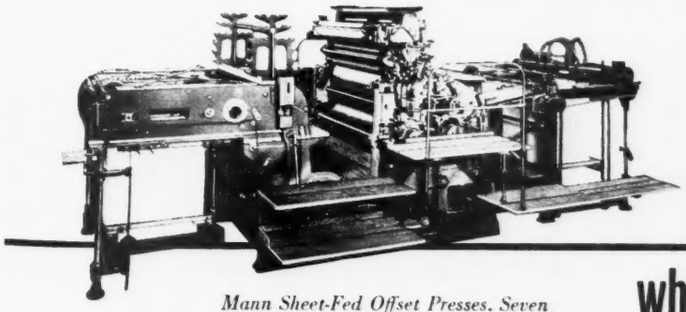
6000 CARNEGIE AVE. • CLEVELAND 3, OHIO

Where American workmen have been building printing machinery for American printers for nearly three quarters of a century

Let's add up the score

and see who wins!

1. *No slippage or streaks*... less plate wear. Exclusive floating impression . . . no bearer contact . . . true kiss touch.
2. *No register-ruining vibration.* Low center of gravity...sturdy construction.
3. *Fast, efficient wash-up.* Unique built-in wash-up device with single-lever operation . . . finest inking system ever put on an offset press.
4. *Smooth, quiet performance.* Helical gears on main drive and in all critical places in the press.
5. *Pressure regulated to .001 in.* between blanket and impression cylinder, paralleling from operating side even while press is running...thanks to *exclusive* parallel cylinder setting device.
6. *Bijur high-pressure automatic lubrication* at all major points.
7. *Automatic stream suction pile feeder.*
8. *Abundant press protection.* Ample detectors, calipers and trips.
9. *Perfectly jogged sheets.* Latest type of chain delivery with chains running on solid track guides.



Mann Sheet-Fed Offset Presses. Seven one-color. Six two-color (for sheets 22 in. x 34 in. to 43 in. x 65 in.) A sheet-fed perfecting press (38 in. x 53¼ in.)

You're the winner

when you buy Mann presses

American Type Founders

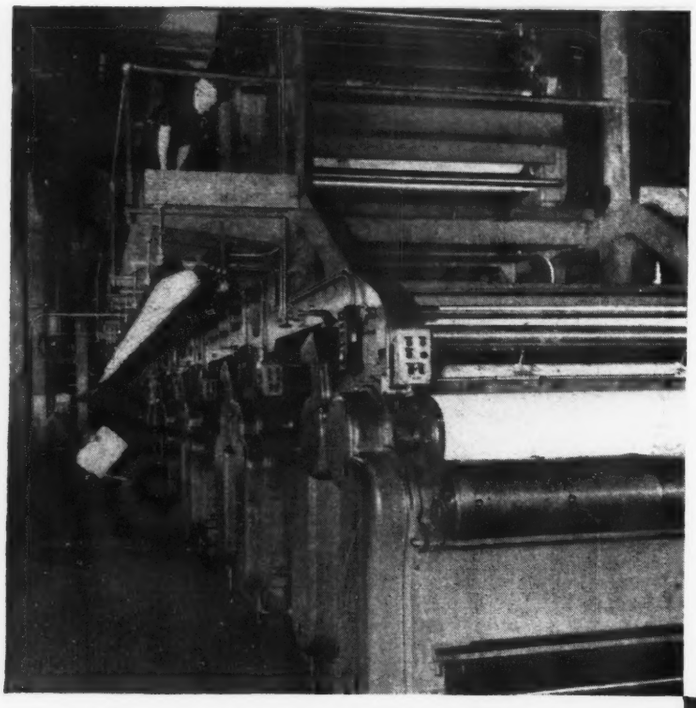
ATF

200 ELMORA AVENUE, ELIZABETH B, NEW JERSEY

Branches in Principal Cities

Manufacturers of Kelly Presses, Little Giant Presses, Chief Offset Presses, ATF-Webendorfer Web-fed Offset Presses and ATF-Klingrose Gravure Presses, Foundry Type and Process Cameras. Distributors of Mann Offset Presses, Challenge, Chandler & Price, Hamilton, Rosback and Vandercook Equipment for Composing Room, Pressroom and Bindery.

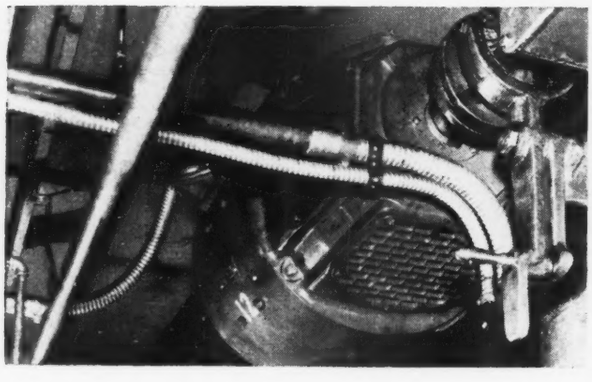
MODERN ELECTRIFICATION boosts pressroom efficiency



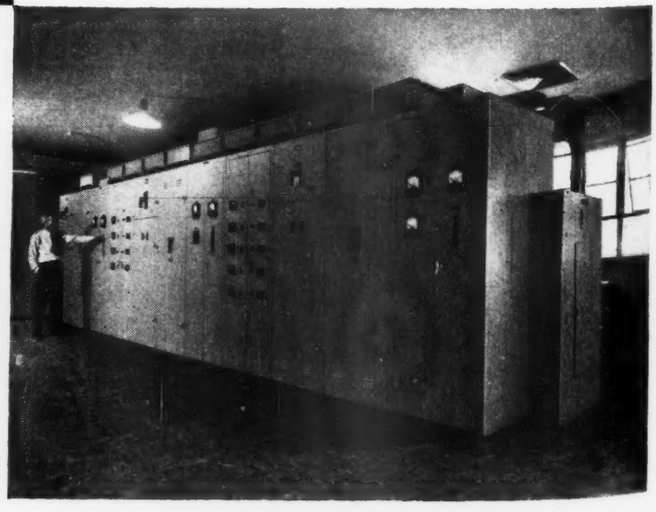
Installed in an Eastern newspaper plant this press is driven by General Electric d-c motors coaxially mounted with one motor on each unit to accommodate any possible mechanical combination of presses and simplify drive selection for these combinations.

G-E ELECTRONIC PRESS DRIVE FOR ROTARY PRESSES INCREASES OPERATING FLEXIBILITY, GIVES YOU:

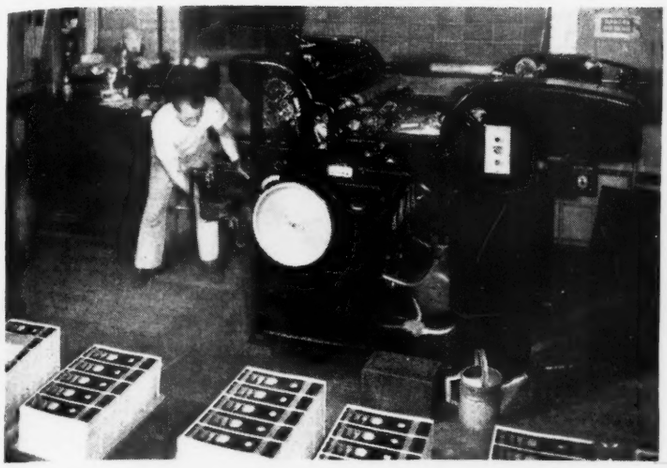
- **Minimum speed variation under load**
- **Reduced power loss**
- **First real stepless speed adjustment**
- **Simplified drive installation**
- **Easy, economical maintenance**
- **Simplified control installation**
- **Finger tip control operation**



One of the G-E electronic press drive motors. No need for slow motion motors, overrunning clutches, or drive brakes. One motor on each unit does it all . . . threading, jogging, running, and braking.



Control room in a west coast plant showing neat, compact, metal-clad controls which come factory-wired and need only be set up and interconnected. The need for extra ventilating equipment and servicing is also greatly reduced.



In this large Eastern printing plant, where a small offset press is driven by a G-E ACA adjustable-speed motor (center) one of the many advantages the operator likes is elimination of controller heat which formerly caused ink to pile up on one side of the press.

Here's the complete package

Now the time-tested adjustable speed ACA motor with built-in preset speed adjustment is combined with pilot motor and control unit. Can be furnished with motor mounted adjustable brake as shown.

G-E ADJUSTABLE-SPEED ACA DRIVE GIVES WIDE SPEED RANGE AND CLOSE SPEED CONTROL

This outstanding new drive for commercial printing is specially designed without resistors to give you:

D-C performance directly from A-C power

Space saving through press mounting

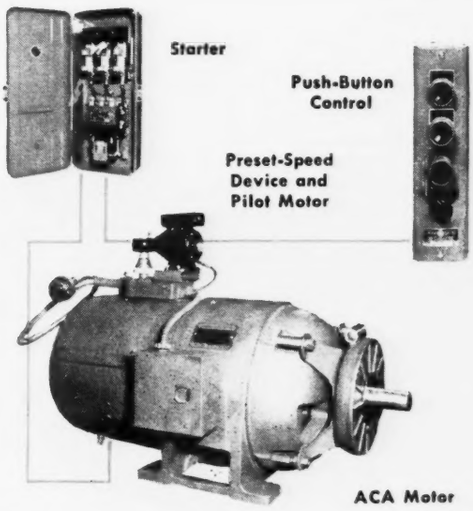
Wider printing speed range

Optimum press speeds through finer speed adjustment

Maximum output of delivered sheets for all jobs

Ease of installation, operation, maintenance

Low over-all cost



GENERAL ELECTRIC OFFERS YOU:

1. A complete line of electric equipment to meet your needs:
Electronic press drive for large rotary presses
AC drives for medium and small rotary presses
ACA adjustable speed drive for commercial printing
Web severing devices
Web break detectors
Push button stations
Web register control equipment
Stereotype heating and control equipment
Plant use equipment, transformers, switchgear, unit substations, cable, and many others.

2. Skilled engineering service to assist you on application problems and installation.

3. Co-ordinated selection, manufacture, and shipment of components to meet your construction and modernization schedules.

4. Quick service from the nearest of 31 service shops, for any emergency any time, to keep your plant and equipment operating.

INVESTIGATE TODAY!

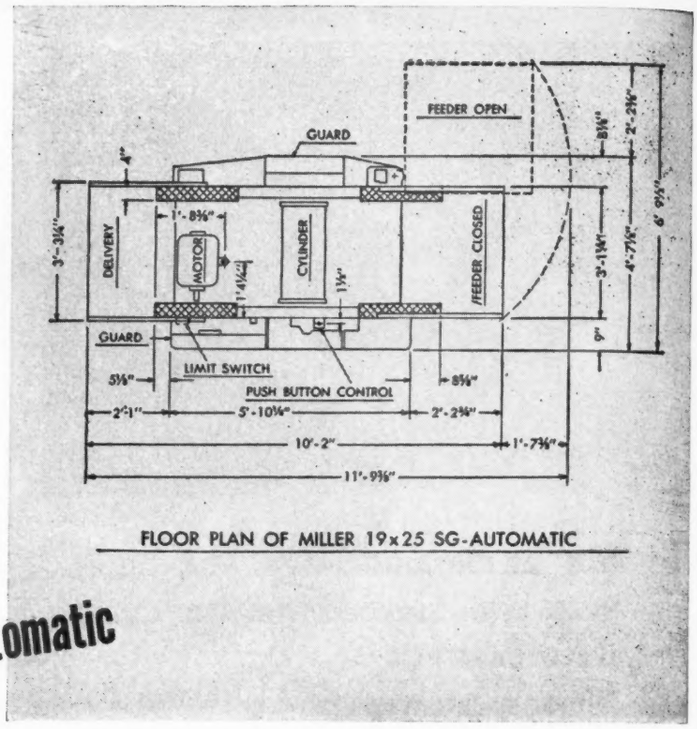
For more information on any of General Electric's equipment for the printing industry and assistance in solving your electrical problems contact your nearest G-E apparatus sales office or write today. Apparatus Dept., General Electric Co., Schenectady 5, N. Y.

GENERAL ELECTRIC

653-13

Floor Plan

Over-all dimensions with feeder open	11′ 9⅜″ long x 6′ 9½″ wide
In operating position	10′ 2″ x 4′ 7⅛″



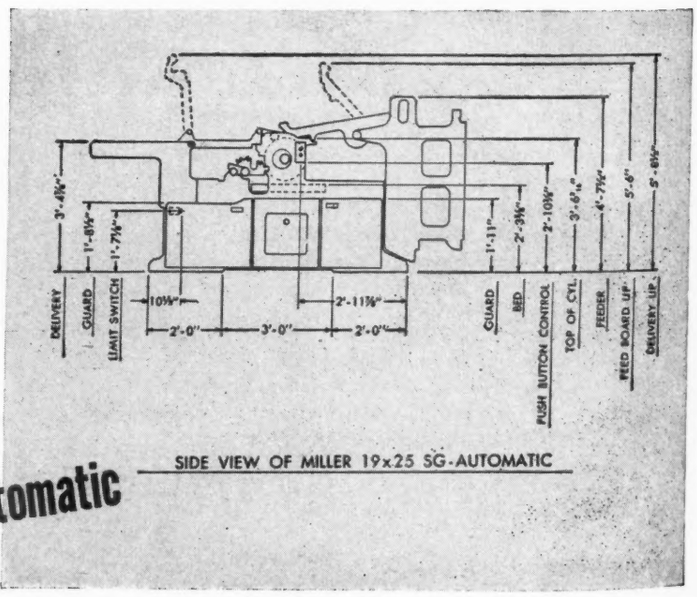
FLOOR PLAN OF MILLER 19x25 SG-AUTOMATIC

Miller 19 x 25 SG-Automatic

Is there a spot in your plant for this pressman's press?

Side View

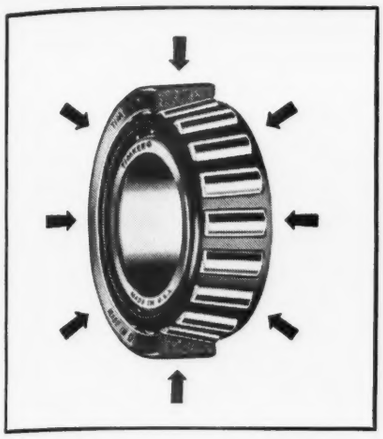
Highest point—with delivery raised	5′ 8½″
In operating position	4′ 7½″
Top of cylinder	3′ 6⅜₁₆″



SIDE VIEW OF MILLER 19x25 SG-AUTOMATIC

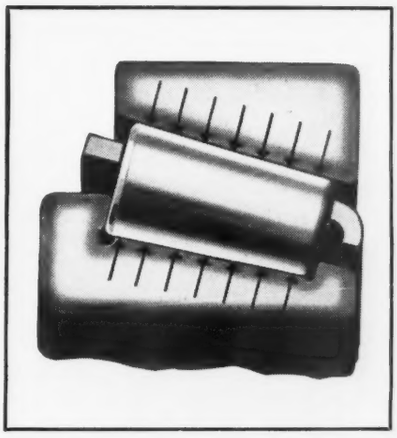
Miller 19 x 25 SG-Automatic

MILLER PRINTING MACHINERY CO.
1103 Reedsdale Street, Pittsburgh 33, Pa.



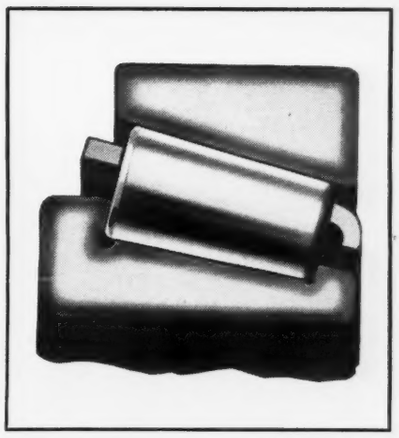
TAPERED CONSTRUCTION

Because Timken® roller bearings are tapered in design, they carry *both* radial and thrust loads. Shafts are held in alignment, auxiliary thrust bearings eliminated, easy adjustment permitted.



LINE CONTACT

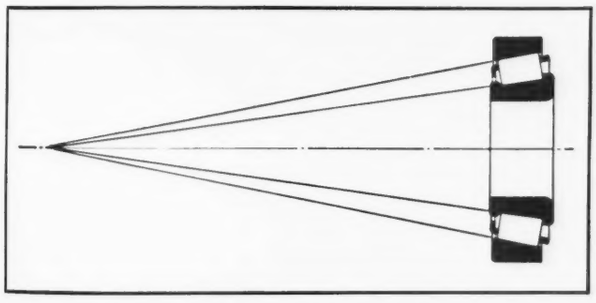
In Timken bearings, the load on the rollers and races is spread evenly over a *line* of contact. Because the load area is greater, Timken bearings offer extra load-carrying capacity.



HARD SURFACE, TOUGH CORE

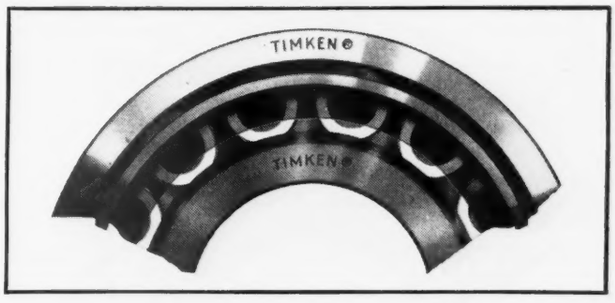
Made of Timken fine alloy steel, rollers and races of Timken tapered roller bearings are case-carburized, resulting in a hard, wear-resistant surface and a tough, shock-resistant core.

To get all this, get TIMKEN® bearings!



TRUE ROLLING MOTION

Since rollers and races of Timken bearings are tapered so that all lines coincident with their tapered surfaces always meet at a common point on the axis of the bearing, the rollers roll smoothly, frictionlessly. Wear is minimized, precision lasts longer. It's another big advantage you get in Timken bearings.



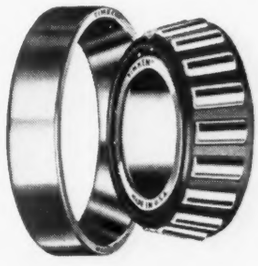
POSITIVE ROLLER ALIGNMENT

Wide area contact between roller ends and rib of the cone insures positive alignment of the rollers in Timken bearings—more precision, less friction, longer wear. Be sure the bearings you buy carry the trademark "Timken". The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS



NOT JUST A BALL ○ NOT JUST A ROLLER ▭ THE TIMKEN TAPERED ROLLER ▭ BEARING TAKES RADIAL ◎ AND THRUST →◎← LOADS OR ANY COMBINATION →✳←

Columbus Ledger-Enquirer praises "SPHEREKOTE" Blankets

The Ledger-Enquirer's new 4-unit press has been equipped with "SPHEREKOTE" Blankets from the first day it has been in use printing this Columbus, Georgia daily! Here is what Alvah Chapman, Jr., Business Manager, and his pressroom foreman, Paul Brooks, say about them . . .

"We consulted several newspapers in our class concerning the press packing they were using. All recommended that we use 'SPHEREKOTE' Blankets. Now it's our turn to recommend these blankets. The sharpness and clarity of our printing leave us completely satisfied and our advertisers are complimenting us on the good reproduction of their ads."

Over 1700 other newspapers all over the country are getting *better printing at lower cost* by using "SPHEREKOTE" Blankets and Drawsheets on their presses. The hard glass-beaded surface prevents offset, smudging and double printing. Means lower costs, too—for "SPHEREKOTE" Blankets and Drawsheets give trouble-free runs, reduce press stops for replating.

"SPHEREKOTE" Drawsheets, Blankets cut costs all over the plant	
Make-up	More preferred positions for cuts and advertising. Make-up moves faster, with fewer interruptions. Allows tighter papers.
Stereotype	No last-minute re-casts to re-position ads or cuts which are picking up first-impression offset.
Press room	Fewer press stops for replating; no waste copies from first-impression offset.
Maintenance	Press packing with "SPHEREKOTE" Drawsheets in many cases lasts up to three times longer!
Ask for "SPHEREKOTE" brand DRAWSHEETS—BLANKETS	

WRITE TODAY FOR COMPLETE INFORMATION!

Minnesota Mining & Mfg. Co., Dept. PEE-51
St. Paul 6, Minn.

Send Swatches and Price List ☐
Have representative call ☐

Name.....

Company.....

Address.....

City.....Zone...State.....

REG. U.S. PAT. OFF.
SPHEREKOTE
BRAND
DRAWSHEETS and BLANKETS

Made in U.S.A. by MINNESOTA MINING & MFG. CO., St. Paul 6, Minn., also makers of "Scotch" Brand Pressure-sensitive Tapes, "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives, "Sphere-kote" tympans and Friskets. General Export: Minn. Mining & Mfg. Co., International Division, 270 Park Avenue, New York 17, N. Y.

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EAST
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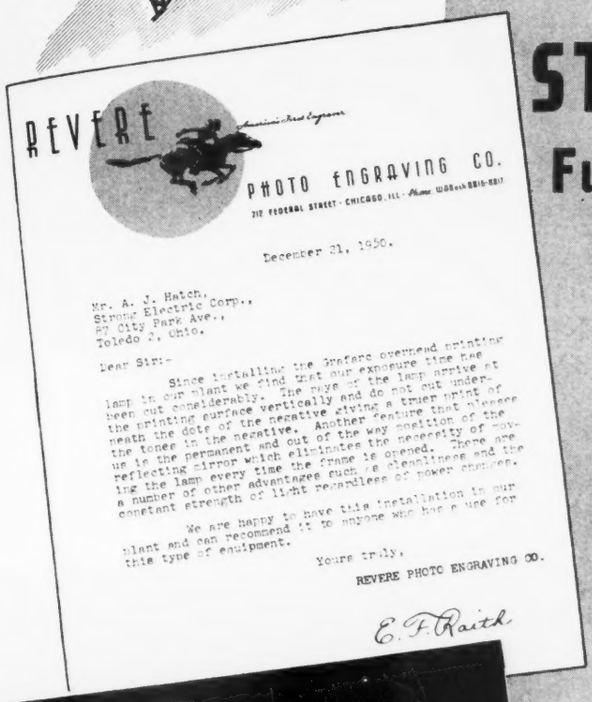
EVERYWHERE

they're installing

STRONG GRAFARC

Fully Automatic High Intensity ARC LAMPS



Revere PHOTO ENGRAVING CO.
712 FEDERAL STREET · CHICAGO, ILL.

December 21, 1950.

Mr. A. J. Hatch,
Strong Electric Corp.,
87 City Park Ave.,
Toledo 2, Ohio.

Dear Sir:-

Since installing the Grafarc overhead printing lamp in our plant we find that our exposure time has been cut considerably. The rays of the lamp arrive at the printing surface vertically and do not cut underneath the dots of the negative, giving a truer print of the toner in the negative. Another feature that pleases us is the permanent and out of the way position of the reflecting mirror which eliminates the necessity of moving the lamp every time the frame is opened. There are a number of other advantages such as cleanliness and the constant strength of light regardless of power changes.

We are happy to have this installation in our plant and can recommend it to anyone who has a use for this type of equipment.

Yours truly,
REVERE PHOTO ENGRAVING CO.

E. F. Raith

Installation of Strong Grafarc No. 32520 overhead printing lamp for horizontal frames at Revere Photo Engraving Company.

IN YOUR PLATE MAKING DEPARTMENT

- Cut exposure time in half
- Assure sharper dots
- Eliminate dot undercutting by crossover of reflected light rays

IN YOUR CAMERA GALLERY

- Uniform illumination on work of any size
- Extreme steadiness of light volume
- Constant color temperatures
- Eliminate illumination variable in accurate control of densities
- Power to punch through dense kodachromes

ON STEP AND REPEAT MACHINES

- Precise control of intensity for accurate repeats.

Approximately twice the light per arc watt results from the use of a silvered glass reflector, instead of a metal reflector. Models for all photo-mechanical reproduction processes. Adapters to fit most cameras and photo-composing machines. Present line supply wiring is usually adequate.

USE COUPON NOW!

THE STRONG ELECTRIC CORPORATION
307 CITY PARK AVENUE TOLEDO 2, OHIO

Please send free literature and prices.

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FIRM_____

STREET_____

CITY & STATE_____

No-Fuss-No-Muss-----

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SERVICE

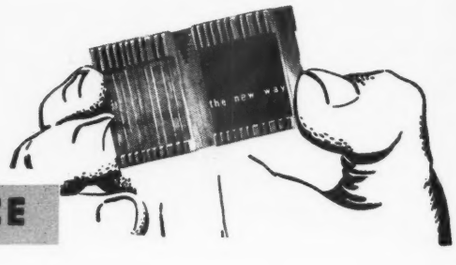
New fonts and sorts shipped from matrix manufacturers are checked against customer's color charts before applying color.

Modern processing rooms in Matrix Contrast plants where matrices are treated before application of colors.

A Matrix Contrast Service Crew operating portable processing equipment in a newspaper plant.

It has taken over 25 years to perfect Matrix Contrast Service. Now, your matrices are treated by a time-tested process that will not flake off nor gum up your machines. Newspaper publishers everywhere will testify to the economical advantages of the Matrix Contrast Method . . . It's clean, it's proven, it lasts. And, too, there are six service branches and 31 trained service crews ready and equipped to give immediate attention to processing your matrices. When you order Matrix Contrast Service, you can forget about the cleaning and processing of your matrices. Your present matrices are treated in your plant by our well-trained technicians without interrupting your schedules. And, new matrices are delivered several times daily from the matrix manufacturers, located in Brooklyn, to our New York plant, where the reference marks are processed day or night. Our Chicago Service Station also receives deliveries several times daily from the Chicago branch of Matrix Manufacturers and is equipped to operate 24 hours a day.

Typical Matrix Contrast Service Truck which 31 crews use to process matrices in your plant...day or night.



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ANPA Exhibit Spaces Still Available

A LIMITED number of unengaged exhibit spaces are available for the ANPA Mechanical Conference to be held at Chicago's Edgewater Beach Hotel, June 11, 12 and 13. A total of 87 booths have been allotted for exhibit purposes. For those interested in exhibiting equipment and/or supplies, a folder containing complete and detailed information, including a plat showing the booth space areas, is available. This information may be obtained from and reservations for exhibits may be made through PRINTING EQUIPMENT *Engineer*, 1276 West Third St., Cleveland 13, O.

Summary of Recent NPA Orders

Paper Set-Aside Revised

The amounts of paper which mills are required to set aside for filling essential government orders was recently revised by the NPA. The revisions increased the set-aside for some types of paper and reduced it for others. The revised percentage list separates newsprint and groundwood grades of paper. The set-aside for newsprint remains at 5 per cent, while groundwood set-aside is increased to 10 per cent. This means that 95 per cent of newsprint paper production and 90 per cent of groundwood paper production will still remain available to fill private orders.

The set-aside for paper-machine coated papers was increased from 5 per cent to 10 per cent to release base stock and machine time to fill government requirements for other kinds of paper. The set-aside for book and fine papers was decreased from 15 to 10 per cent except for the rag writing grades, which remained at 15 per cent. The large background of government requirements which necessitated the 15 per cent reserve for book and fine papers has to a large extent been dissipated, NPA said.

Aluminum Offset Plate Toll Approved

As reported in the April issue of *Printing Equipment Engineer*, authority has been granted lithographers by NPA to send their unusable aluminum offset plates to Graphic Arts jobbers as has been the practice in the past. Such jobbers are authorized in turn to toll such plates with the Aluminum Co. of America and receive in return an equivalent of new plates by weight. NPA Order M-22, which controls the distribution of aluminum scrap, prohibits toll agreements unless approved by NPA.

Exempts Type Metal Use

The use of type metal is for all practical purposes exempt from the use limitation provisions of amended Lead Order M-38. The amended order restricts the consumption of lead in manufacturing to 100 per cent of base period (the 6 months' period ending June 30, 1950) use. However, the amended order exempts any person who consumes less than 5 short tons (10 thousand lbs.) of lead or lead-base alloy (type metal) in any one month.

A Graphic Arts firm would be subject to the use limitations of the amended order only if it acquired more than 5 T. of type metal in any one month over and above any credit for scrap returned for remelting. The order also reduces permitted inventories for Graphic Arts firms from 60 to 30 days' supply or in excess of a practical minimum working inventory, whichever is less. Thirty day supply is defined as the smallest quantity of such material which a person reasonably requires to meet deliveries or maintain currently scheduled rate of operations during the succeeding 30 day period.

Printing Rollers

Newspaper form and ductor rollers, letterpress rollers, gravure and impression rollers are restricted to the minimum amount of dry natural rubber or natural rubber latex required in their manufacture, according to amended NPA Order M-2. Similar restrictions were imposed upon offset and newspaper press blankets, paper pick-up suction cups, cutting rubbers, etching plates, adhesive fabric, rubber solution for wet plate negatives, and stiff plate backing.

E. Byron Davis, Vice President of Ideal Roller & Mfg. Co., discussed availability of raw materials used in printing and lithographing rollers.

In a discussion on the availability of raw materials used in printing and lithographing rollers before the Milwaukee Graphic Arts Assoc. on April 9, E. B. Davis, Vice President of Ideal Roller & Mfg. Co., declared that not all roller materials are on government allocation. So far, he stated, glue and vulcanized oil materials are both available without allocation procedures. Both natural and synthetic rubber, however, have been on allocation since September 1950.

Shortages in high grade hide glue are likely to result in poorer composition rollers, Davis added, because of the necessity of extending the available high grade glue with lower grades and reclaim in order to meet demands. The oil used in vulcanized oil rollers are still plentiful and their quality should remain the same unless some shortage of these develops.

Cadmium for Inks

Under an amendment to NPA Order M-19, cadmium may be used in the manufacture of pigments for printing ink for non-military use up to 40 per cent of average monthly use during the base period. Originally the order permitted the use of cadmium in pigments only for luminescent paint and printing inks for military use and luminescent paper for military and Government Printing Office use.

Reg. 4 (DO-97)

NPA Regulation 4 (in addition to industry in general) provides a procedure by which printing establishments and other Graphic Arts firms may use a DO rating (Defense Order), identified by the symbol DO-97, to obtain maintenance, repair, and operating supplies (MRO). The same rating may be applied to minor capital additions which do not exceed $750 for any one item.

In the order *Maintenance* means the minimum upkeep necessary to continue any plant or equipment in sound working condition. *Repair* means the restoration of any plant or equipment to sound working condition when it has been rendered unsafe or unfit for service. *Operating Supplies* means any materials which are normally carried as operating supplies according to established accounting practice.

It is understood, for instance, that

(*Continued on Page 46*)

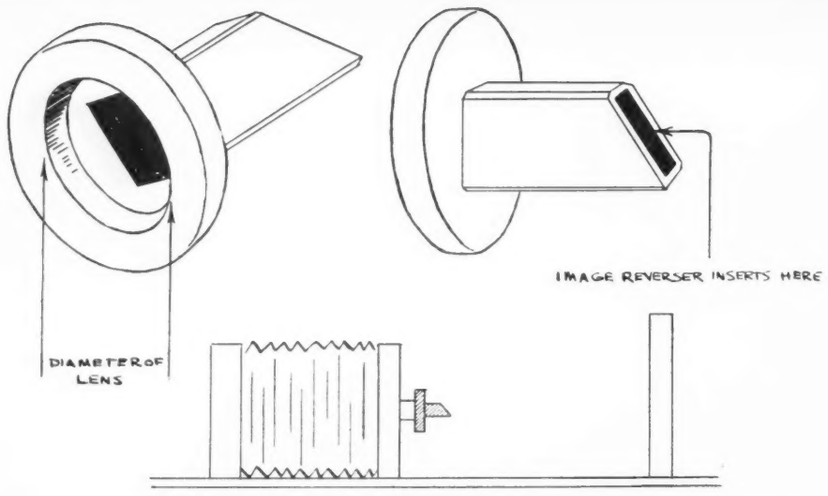


Fig. 1.—This diagram is illustrative of the general design of a wood holder in which is inserted a surplus prism reverser. Use of the reverser on the camera permits making spot reverses with camera and copyboard in straight line position instead of positioning them at right angles to each other. The adaptation of the prism, the design of the holder and its making were evolved by Alvin Bryan, Marshalltown (Ia.) photoengraver.

Surplus Material Image Reverser

By ALVIN BRYAN*

Marshalltown, Iowa.

THE writer is familiar with the use of prisms and mirrors in photomechanical plate production. These devices make it necessary to have the camera operate at right angles to the copyboard. This is not always practical in certain cases because of floor space limitations and the time element in reproducing copy. The straight-line image reverser is intended to do the same work as a prism except that it fits on the lens mounting in place of the lens cap and the copy is placed straight in front of the camera on the regular copyboard. In this way, negatives reading from left to right on the emulsion side can be made.

Fig. 2.—Miniature reproduction of piece of art work. The word "anniversary" was reproduced by Mr. Bryan with the surplus image reverser on litho negative paper. The paper was trimmed close and cemented to the black inked-in ribbon shown in this art copy. The type, while reversed in color, still reads from left to right as in the original type proof. After the spot had been cemented to the copy, a regular film negative was made and from that negative a zinc etching. This method eliminated making a film reverse together with stripping. Should it be necessary to make several sizes of plates from the same art work, a considerable saving to the customer is secured.

By using paper negative material, photocopy work similar to Photostats can be done. This makes a handy arrangement where your firm is located in a town in which this service is not available —both for your own use and also as a source of extra revenue. It is also useful for making reverse spots for pasting on art work and the like.

It is our understanding that straight-line image reversers are quite expensive. In our case, however, we bought surplus optical goods from a distributor, the Comet Engineering Service, Box 127, Des Moines, Ia.

The catalog number is SL-3998 and it cost $22.50 postpaid. The writer is not too sharp on optics and technical data. Consequently, he cannot give a full report on its uses. However, by making two wooden holders for interchangeability of the prism, (of the type shown in Fig. 1) we use it on both a 12 in. Goerz lens and on a Wollensak 16 in. lens. We found it works equally well on both lenses.

The utility of the surplus prism will be apparent to photomechanical camera operators. We have used it for spot reverses on art work. See Fig. 2. As has been stated previously in this article, we do not have a regular photostat or copy service in our town. We are making spot reverses on litho negative paper so out customers can use them in preparing copy for offset-lith plates. We also use it to make copies of checks, receipts, birth certificates, etc. The miniature reproduction shown in Fig. 3 is an example of the use to which we put the surplus prism.

Front-Line Representatives

(Abstracted from an address delivered before the annual convention of the Printing Industry of America, Chicago, September 1950, by William F. Gutwein, C. T. Dearing Printing Co., Louisville, Ky.)

FOREMEN in our industry are the front-line representatives of top management, and they actually conduct more than 80 percent of management's labor relations. Despite this key role in dealing with skilled personnel in the printing industry, top management, with very few exceptions, has neglected to define or respect the foreman's position in their organizations. This is one of our industry's greatest blunders, for unless a foreman has an idea of company policies and rules, knows something about production methods and costs; knows how to indoctrinate, teach and train employees; knows how to handle grievances, maintain discipline, and get cooperation from a large assortment of workers; he is of very little use to a company as a member of the management team.

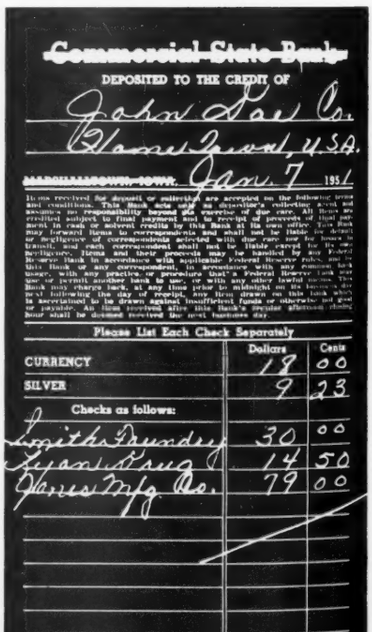


Fig. 3.—Miniature reproduction of a bank deposit slip from the original 3 in. by 6½ in. size. Similar work is done by Mr. Bryan's firm for banks, business firms and others with the aid of the surplus image reverser.

Solving an Ejection Problem

By JOE CORY*

**Chief Composing Room Machinist, St. Paul (Minn.) Dispatch and Pioneer Press.*

WITH the introduction of the 9 col. classified page on the St. Paul newspapers, a problem arose with respect to the ejection of slugs from the line-composing machines. Our machines are equipped with four-mold disks. We were expected to handle 12 pica 9 pt. slugs, 12 pica 5½ pt. slugs, and a 10½ pica 5½ pt. slug. At the outset, we ran into a considerable amount of liner breakage simply because it was difficult for the operator to remember to change the measure of his ejector blade, he not having made ejector changes for many years.

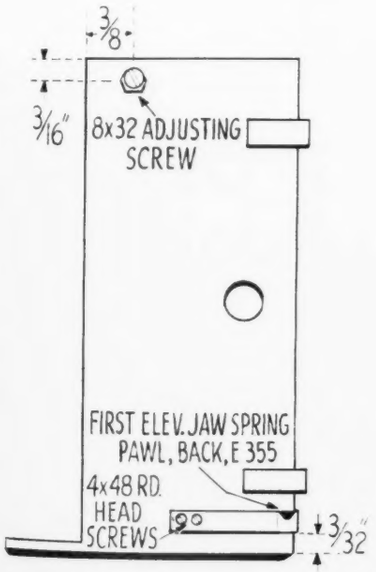
Using a 10½ pica ejector blade to eject a 12 pica slug presented a problem because the lower portion of the slug is free while the upper rib is still being trimmed by the side trimming knives, particularly on some molds which had an extra rib at the extreme upper end of a 12 pica slug, causing the slugs to tip up. The extreme pressure applied by bending the spring plate (E-1043 Linotype and U-319 Intertype) failed to solve the problem. Shifting the mold caps on Intertypes was not satisfactory.

By installing a first elevator jaw spring pawl in the position indicated in the diagram on the knife block spring plate, steady slug ejection resulted. So that the loop of the pawl can be made to do its work of retarding the tendency of the lower end of the slug to tip up during the trimming operation, a square notch is cut in the lower back edge of the knife block spring plate. This notch permits the spring loop to engage the slug. When we first installed the pawl it broke after operating the machine for a while and we were again in the same trouble.

Going on the basis that two pieces are better than one, two spring pawls were installed, one on top of the other, in the position indicated in the diagram. Since then we have had no trouble with partial ejection of the slug by the shorter measure ejector blade.

By locating the pawl 3/32 in. from the lower edge of the spring plate to the lower edge of the pawl, the lower rib of the slug will strike the approximate center of the spring pawl during ejection.

A rnd. hd. 8x32 adjusting screw with hex. nut as shown in the diagram, applied at the upper part of the spring plate helps control the pressure on the pawl. The end of the 8x32 screw is adjusted to bear against the vise frame so that the pawl loop will contact the lower rib-side end of the slug sufficiently to prevent the tendency of the slug to swing up in an arc of a circle.



This diagram is illustrative of the method employed by Joseph Cory, Chief Composing Room Machinist of the St. Paul (Minn.) *Dispatch* and *Pioneer Press* in preventing the lower end of 12 pica slugs swinging up in an arc of a circle while being ejected on line-composing machines when a 10½ pica ejector blade is used to eject the slug from the mold. Use of the 10½ pica ejector blade to push 12 pica slugs from the mold is occasioned by 10½ pica and 12 pica composition being done intermittently during a shift. The illustration of the knife block spring plate is self-explanatory. The notch in the lower back edge of the spring plate permits the spring pawl to project through the left side of the plate to prevent the lower end of the slug swinging up in an arc of a circle. The 8x32 adjusting screw with hex. lock nut at the upper part of the spring plate permits securing just the right amount of pressure of the pawl loop against the slug.

Type Book of High Utility—A lot of talent, time, money and effort has been put into the production of type books, particularly by the Intl. Typographic Composition Assoc., and more prominently by well known typographers throughout the country. It is not *Printing Equipment Engineer's* wish to minimize the utility of the many de luxe books which have appeared from time to time. But we wish to discuss briefly the miniature type specimen book published by the St. Petersburg (Fla.) Printing Co., Inc. Vice President and General Mgr. Ben Granger explained that needs of those ordering printed matter vary considerably. Most customers are not typographers, nor are they familiar with the Graphic Arts industries, but they can sometimes better interpret the personality of their industries. By means of a conference over the type book, the first step between customer and printer is made toward formation of design and layout.

The type specimen book issued by the St. Petersburg Printing Co. is loose leaf style with punched leaf ends. Two paper fasteners (cotter pin style) hold the assembly together. As new type faces are bought, inserts are printed and sent to the clients. The book measures 6 in. wide by 3 5/16 in. high. In total, there are 70 pages of type specimens. On some sheets where space permits there may be as many as five one-line specimens set 30 picas wide. No information other than that which appears in each specimen line is given. All type specimen pages are divided in families by tan cover stock. The type specimens are printed on white crash finish paper. The borders, ornaments, braces, rule, doo-dads and the like are shown at the back of the book.

Among other statements in the *Foreword* appear the sentences: "We are in business to serve you. When you have selected the types you like, bring your copy in, and let's go over it together."

Improved Newspaper Techniques Discussed at Mid-Atlantic Mechanical Conference

By STAFF WRITER

TECHNOLOGY in the industry, research and experience data with respect to production operation of recently developed equipment occupied the attention of over 400 mechanical executives at the April 5 to 7 meeting of the Mid-Atlantic Newspaper Mechanical Conference held in Reading, Pa. Conference Chairman was Ralph R. Cranmer, Business Mgr. of the Williamsport (Pa.) *Grit*. He was assisted by Co-Chairman Herbert G. Taylor, Mechanical Supt. of the Bethlehem (Pa.) *Globe-Times*.

BAKER STRESSES MAINTENANCE

PROPER maintenance of stereotype equipment was discussed by President Craig C. Baker, Sta-Hi Corporation, before the recent Mic-Atlantic Newspaper Conference, Reading, Pa. "With the threat of war and resulting shortages, maintenance and repair of stereotype equipment are extremely important," he said, Included in his suggestions were: Scheduling of lubrication, constant checks of tension on belts, and periodic replacement of air cleaners. In speaking of lubrication, he said, "A few drops of oil every day are so much better than a lot applied all at once."

Dual Plant Operation

Making the smaller newspaper plant into a dual operation, with job printing being elevated to an equal position with publishing of the newspaper as a revenue-producer was advocated by George Gaskell, Mechanical Supt. of the Mount Holy (N. J.) *Herald*. "A printing plant is in reality a factory which can like other factories be arranged and operated by assembly line methods to increase revenue," he said. Making two separate organizations of the publishing and printing departments was Gaskell's advice. Once this is accomplished, he continued, the printing department will handle the paper as a job and will bill the publishing department just as any other job work is handled.

A Look Ahead

J. Homer Winkler, Technical Advisor, Battelle Memorial Institute, Columbus, O., spoke at the Saturday luncheon meeting. The title of his address was: *A Look Ahead for Newspaper Mechanical Production*. He stated that in producing a newspaper efficiently and profitably, good management procedures will yield results. Particular emphasis should be placed on the personnel phases of operation. Careful studies of waste should be made. Well organized maintenance departments can eliminate much down time and keep equipment in top operating condition. Control procedures can be made to assure uniformity of quality and results whenever they can be adopted.

Winkler asserted a look ahead indicates that one of the most necessary activities for the newspaper publishing industry is the support of an adequate program of research and development. Referring to the Research program presently being conducted under the supervision of C. M. Flint, he stated a well organized research program is in progress. "However," he said, "the percentage of the sales dollar being spent by the newspaper industry on research is woefully inadequate." He indicated that the amount being spent by the newspaper printing industry would be only two-tenths of one per cent of the sales dollar, as compared with six or eight per cent being invested by the chemical industries. He referred to the Steelman report in which it is recommended that an average of one per cent of sales be budgeted by industry for research.

Winkler discussed the stereotype plastic molding blanket with which the ANPA Research Dept. has been working for some time. "Actually," he stated, "the ANPA laboratory staff performed all of the preliminary surveys and evaluations, determined the conditions of operation, and was able to specifically present a material and a method of use that would work. This does not mean that it is the best, or that it cannot be abused, or that other ways and materials will not work. It is being used successfully by a number of newspapers. If they can attain results, all other papers can do likewise *if* they will perform the operations in exactly the same way with the same materials, equipment, and kind of forms or subjects . . . The plastic molding blanket is new. It should be evaluated without bias and should not become a cause . . . To make good use of the plastic stereotype molding blanket, instructions for use must be followed. A number of adjustments of operating conditions may be found necessary. In the meantime, additional laboratory results and plant experience will quickly improve the technique and reduce failures."

Regarding extensive application of typographic copy preparation devices and phototypesetting machines, he said this was not likely until a full-size newspaper page combination photoengraving can be made in 15 min. or less. He concluded: "Such a process is not discernible at present."

Among Mr. Winkler's concluding remarks were the following: "Controlled etching of zinc or magnesium is practically a certainty now and will be of great benefit when it is more generally adopted. The first bite is the critical one insofar as cleanliness of printing from curved stereotypes is concerned. Only through controlled etching techniques can consistent and maximum depths be achieved during the first bite."

DROP DOT HIGHLIGHTING PROCESS

THE Drop Dot process was discussed by G. O. Berry, New York Div., Drop Dot Corp., at the recent Mid-Atlantic Newspaper Mechanical Conference in Reading, Pa. The Drop Dot process brings to four the number of photographic highlighting processes on the market, the others being the Kemart, Chromolite and Flurographic processes, he said, and is closer to the products of the Kemart Company, with which it is allied, than to any of the others. The Drop Dot process works on the fundamental principle of fluorescence and produces the same results as the Kemart method, but eliminates the necessity for the artist to prepare his drawings on specially prepared paper. The technique is not limited to wash drawings, but works with almost any other media, singly or in combination, permitting the artist maximum freedom in his selection of materials and methods.

Where the artist uses any kind of pencil or crayon he draws in the tones and values he wants, Berry continued. When using a wash, he uses a special Drop Dot wash and thinner. There are no other limitations. When Drop Dot reaches the engraving shop, the engraver sprays it with a special solution and the remainder of the reproduction operation is the same as the Kemart process except that a blue instead of purple light is used to irradiate the copy. The exposure takes one or two minutes for the same size reproduction.

Drop Dot Thinner is the heart of the Drop Dot Process. It is not an ultra violet absorber, and it is not fluorescent. It is chemically compatible with the Drop Dot Wash Black to produce a smooth, even tone in the art—whether 5%, 50% or 95%. The Thinner reacts instantly with the cellulose fibres of the paper, and the paper sizing, to reduce surface tension and speed penetration of the structure of the paper fibre. It changes the chemical structure of each paper fibre itself. This later results in a calculated reaction to the selected kinds of light used during the Drop Dot exposure, but *not* to white light.

Tubular Press Operation

Operation of flatbed and tubular presses was discussed by Robert H. Gibb, Pressman, Carlisle (Pa.) *Evening Sentinel*, and Mr. Bunn. Gibb explained a sectionalized rubber top roller that he developed, and said that "this particular roller can be used to print one or eight pages in one operation by pulling off one section at a time." Anyone with tubular presses, Mr. Bunn said, should get good impressions, providing the plates and presses are in proper working order.

In a question and answer period following the talks, executive queried a panel of experts composed of Regis Spielvogel, Mechanical Supt. of the Ellwood City (Pa.) *Ledger*; D. H. Moreau, Flemington (N. J.) *Democrat*, and John Hawkins, Penns Grove, (N. J.) *Record*. Included among the topics discussed were proper metal temperatures, marking of ad copy, and the elimination of static electricity.

Composing Room Session

Composing room problems were considered at the Friday afternoon session which was presided over by Claude E. Schell, Composing Room Foreman of the Reading (Pa.) *Eagle-Times*. Victor D. Shanahan, Composing Room Supt. of

(*Continued on Page 50*)

Groups of Mechanical Executives and Manufacturer and Supplier Representatives Attending Mid-Atlantic Conference.

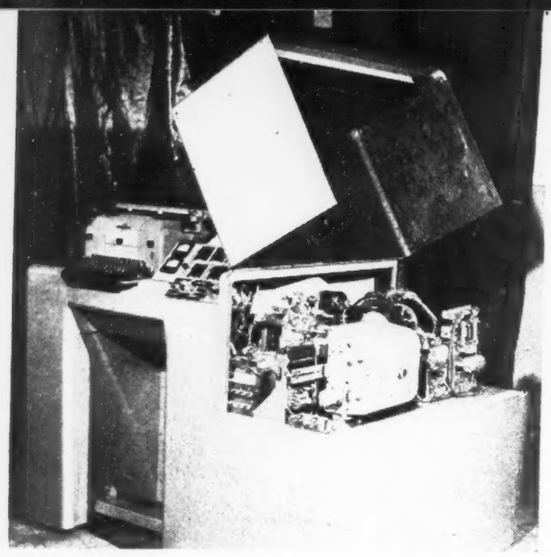
1.—(left to right): Claud Schell, Reading (Pa.) *Times;* Victor Shanahan, Jersey City (N. J.) *Journal;* Peter Reidegear, Lebanon (Pa.) *Daily News;* Fred C. Rebstock, Elizabeth (N. J.) *Journal;* George Paustenback, Tarrentum (Pa.) *Valley News*.

2.—(left to right): Fred M. Humphrey, Philadelphia *Daily News;* Nicholas Fellman, Mechanical Supt., and Warren Casner, both of Chester (Pa.) *Times;* Charles S. Caffrey, Wood Newspaper Machinery Corp.; George H. Trass, jr., Philadelphia *Bulletin;* George Hibbert, Chester (Pa.) *Times*.

3.—(left to right): Rudolph Kuhner, Sharon (Pa.) *Herald;* Charles Fritschi, President, Stereotex Machinery Co.; Andrew Scott, Beaver Falls (Pa.) *Times;* Edgar A. Mills, jr., President, Eastern Newspaper Supply, Inc.; Frank A. Kopp, Goss Printing Press Co.; Allen C. Spurgeon, Allentown (Pa.) Newspapers; M. L. Detwiler, Mechanical Supt., Lancaster (Pa.) Newspapers.

4.—(left to right): R. J. Hummel and S. W. Miller, Allentown (Pa.) Newspapers; Henry Englehart, Reading (Pa.) *Eagle-Times;* C. H. Larson, Chemco Photoproducts; Joseph P. Dorr, Capital Tool & Mfg. Co.; D. C. Green, Vice President, Wesel Mfg. Co.

5.—Members of the panel of the joint Press-Stereo Session. (left to right): Rudolph Kuhner, Press Supt., Sharon (Pa.) *Herald* and chairman of the session; John A. Lohan, Stereotype Supt., Philadelphia *Bulletin* and session co-chairman; Harold Eich, Press-Stereo Dept., Meadville (Pa.) Tribune Pub. Co.; Keith Wesley, Phoenixville (Pa.) *Daily Republican;* Leo J. Carle, Mechanical Supt., Erie (Pa.) *Dispatch;* and John S. Stinson, Pressroom Supt., Johnstown (Pa.) *Tribune* Pub. Co.



Improved Phototypesetter Exhibited

A PRE-PRODUCTION model of the Higonnet-Moyroud photographic type composing machine was exhibited at the Waldorf-Astoria Hotel, New York, during the week of April 23 simultaneously with the convention of the American Newspaper Publishers Assoc. End product of the machine is a positive or negative film used in producing type composition in the photomechanical platemaking processes.

The equipment exhibited at the Waldorf-Astoria was operated at the rate of six letter character exposures per sec. William Garth, jr., President of Graphic Arts Research Foundation, Inc., Cambridge, Mass., stated eventual maximum speed of exposure will be 15 characters per sec., or 30 lines of straightmatter composition on film.

Since exhibition of the laboratory model Higonnet-Moyroud machine in 1949 (reported in the November 1949 issue of *Printing Equipment Engineer*), the equipment has been refined in operation, and a greatly amplified character-bearing matrix disk and a unit cabinet have been developed.

Apparently, for the present at least, it is intended to combine the electric typewriter and the film producing mechanisms in one cabinet. The pre-production model of the Higonnet-Moyroud machine consists of a metal desk-like cabinet in which are mounted the electric typewriter and the automatic type reproducing units. The line justifier equipment, however, is mounted in a separate cabinet which is approx. 2½ ft. wide, by 1 ft. deep, by 6 ft. high.

Production and Mechanical Executives are invited to submit to the editor informally in a letter devices which have helped production in their plants.

Report is Unfounded

During the week of the ANPA convention at the Waldorf-Astoria, an unfounded rumor was in circulation. It was reported that a new method for etching a full page magnesium newspaper page plate in 6 min. had been developed and would be ready for the market in 6 mo. *Printing Equipment Engineer* discussed the report with Dr. George H. Found, Technical Director, Magnesium Div. of Dow Chemical Co. Dr. Found said his organization is working on faster etching methods. At the moment this work still is strictly in the laboratory stage, and the results are very encouraging, but there is nothing to report at this time.

Pre-Production Machine

Type characters are produced by operation of an electric typewriter at standard typing speed. Controls at the right of the typewriter keyboard provide for (1) Length of line, (2) Style of type, (3) Point size of type, (4) Point-set or body-width of type, and (5) Space or leading between lines.

As the operator manipulates the keyboard keys, the typewriter prints each character in the line on paper just as is done on a standard typewriter.

In the present model, the length of type line may consist of any measure up to 6 in. (approx. 36 picas).

Dials enable the operator to visualize the unused space remaining in the line being composed and the justification increment that will be placed between the words. Any error in composition may be eliminated by pressing a correction key and strikingover with the correct letter.

An entire line may be deleted by pressing the kill-line key, during typing of original copy.

The Matrix Disk

The heart of the photographic unit is a single matrix disk approx. 8 in. diam. In negative form, the disk carries 16 type alphabets. These are arranged in circular form on the flat surface of the disk but the curvature of each alphabet corresponds to the circumference of the disk itself; each letter character is arranged radially with the disk axis. (Principle of operation of the photographic unit was described in November 1949 *Printing Equipment Engineer*.

Outstanding development of the Higonnet-Moyroud machine since exhibition of the laboratory model in Cambridge, Mass., in 1949, is the positioning of multiple type faces on one rotating disk with accompanying device for operator-selectivity at will.

Each matrix disk may carry 16 complete 90-character alphabets, or 1440 individual characters or symbols. The disk in the model exhibited at the Waldorf-Astoria bears the following type families: Bodoni Bold, Bodoni Italic, Ionic Roman, Baskerville Italic, Bookman Roman, Modern Roman, Gothic Condensed Roman, Caslon Small Capitals, Bodoni Roman, Cheltenham Roman, Baskerville Roman, Baskerville Small Capitals, Century Expanded Roman, Elzevir Ronaldson Roman, Caslon Roman, inferior and superior numbers and various border characters.

According to the sponsor, any character of the 16 alphabets may be set in eight selected point sizes giving the equivalent of 8 times 16, or 128 alphabet versatility from the one matrix disk. The matrix disks may be interchanged in less than 1 min.

The matrix disk for the Higonnet-Moyroud machine weights 1½ lbs.

It has been announced that it is possible to mix any of the variables within the same line without interfering with justification or alignment.

The lens system provides for eight point sizes. Those on the display model cover a range from 6 pt. to 14 pt. The body width may be varied from 1 pt. to 15 pts., and there are an infinite variety of leading selections in multiples of ½ pt.

Mr. Garth also reported that the Foundation's automatic page makeup machine is being developed and announcement of its production will be made at a later date.

Corrections in type matter will be made automatically by "optical merging" means. The equipment to accomplish this important operation is yet to be announced.

Please take a look at your address on the wrapper in which *Printing Equipment Engineer* is sent to you at your place of employment. If it isn't correct, please tell us about it on a postcard.

TO FACE NEW PROBLEMS

MECHANICAL and production executives heard J. Homer Winkler speak at the Mid-Atlantic Newspaper Mechanical Conference, recently in Reading, Pa. Winkler is Technical Advisor of Battelle Memorial Institute, Columbus, O. He commented: "Newspapers are going to face some new problems along with these already in existence, but improved mechanical processes will help considerably in the competition fight." Winkler, who has been working on newspaper research problems for many years, did foresee improvements in ink, and the engraving and stereotype processes. However, he said engravers would be able to work under controlled conditions in the future, something they cannot do today, and that newspapers in general will in time have a better appearance and be free from defects.

The ABC of OFFSET

For Letterpress Printers

By George Jos. Lenzer

XV—THE HALFTONE

CONTINUING our discussion of the halftone and the halftone process (Fig. 27), other pertinent factors will be considered. Since some reference material may be required, consult the footnotes for reference list at the end of this chapter.

There is a distinct connection between the Law of Inverse Squares and the Conjugate Foci. Without any interference, the intensity of light diminishes inversely to the square of the distance light must travel from the copy surface to the surface of the sensitive emulsion, (Fig. 27, at B.)

Since we are dealing with light motion, it must be remembered that the copy, by its nature, texture, pigmentation and contrast, sets up the first real interference of free moving light waves. Here incident light is transformed into diffuse reflected light waves. This transformation accounts for the first major loss of activating light rays.

The second interference and light loss occurs in the lens assembly. Unless the lens is one of the coated variety, specular reflection from the lens surface and the internal surface reflection and diffraction occurring within the several lens elements, create the following effects:

A—Intensity of the image forming light waves is reduced;

B—A secondary transmittable illumination of weaker intensity is created, and

C—The intensity of all transmittable light is affected by the lens stop or diaphragm.

The weakened image-forming light rays, transmitted and projected within the camera bellows, is further weakened in intensity, in accordance with the Law of Inverse Squares. Upon striking the halftone screen surface, the image-forming light rays are again subjected to further losses of intensity.

According to some theorists, it is estimated that 75% of the light striking the screen is lost, through surface reflection, internal diffraction and diffusion, and interference of the cross-ruled screen grating. This is the third major light loss suffered during a halftone exposure.

Because of the short distance the remaining 25% of light travels between the screen and the emulsion surface, the percentage of light loss is negligible, even though the distance (for reasons of accuracy), is included in overall calculations.

From preceding observations and with reference to Fig. 27 it is evident that the intensity of activating light rays diminishes in two directions as is indicated by the large white arrow and the descending arrows at B.

Lens, Apertures and Time

Any smooth surface that reflects light and forms images of reflected objects is either a mirror or a mirrorlike surface. The polished substance may be flat, prismatic, facetted, round, or curved, and may be opaque, translucent or transparent. The lens, being highly polished and backed by the black interior of the camera bellows in a mirrorlike manner, forms an image of the copy upon its surface.

The light, forming the image on the polished surface of the lens, is the only light transmitted by the lens.

We learn from the prism, that light is deflected or diffracted while being transmitted. From the action of light, we learn that light is subject to diffuse and specular reflection. These facts are important now, because of their effects in photographic exposures.

By diffraction, the image forming light rays striking the lens are so directed as to meet at a focal point of convergence. It is at this point that the transmitted image is inverted. The divergent cone of image-forming light has a specific intensity of its own over all of the focal surface it covers.

The Aperture—If the diaphragm were placed in front of the lens, it would, by opening and closing the aperture, increase or reduce the size of the image formed on the lens surface. By placing the diaphragm between the outer elements of the lens, adjustment of the aperture openings, controls the transmission of the activating light rays, and determines the quality of the resulting shadow, detail, highlight and flash dots, appearing in the halftone negative.

Continuous tone negatives and prints have a longer range of contrast than that obtainable in halftone printing. This longer range of contrast can be expanded or condensed, when making the negative, by varying the lens aperture or the screen distance. Aperture adjustment is preferred because fewer materials and controls are required.

Variable apertures used in contrats control determine the shadow, middletone, detail, highlight and flash exposures. The apertures are designated numerically by the size of the diaphragm opening at same size reproductions. These numbers also define the series of openings necessary for constant contrast control over different enlargements and reductions.

Although single exposures for halftone reproduction are possible, these are dependent upon the ideal tonal range of the original. The aperture opening may be an intermediate stop between the highlight and detail apertures, or else a combination of a single aperture and a special diaphragm opening called a Waterhouse Stop. Waterhouse diaphragm stops are used primarily for special effects.

Variable Exposures—In offset reproduction, most photographers employ the multiple or variable exposure method, the principles by which contrast control is obtained by exposing through several lens apertures.

The largest aperture or highlight stop f/16 or f/22 is used, during an exposure for undercutting the screen lines so as to join the dots formed by exposure through the detail opening, until only tiny pin point dots remain in the areas of the negative corresponding to the highlights appearing in the copy.

Exposure through the detail aperture f/32 or f/45, fills in all of the detail of the original, but if used alone the detail stop produces what are called flat negatives, having plugged shadows and overly large highlight dots.

The flash exposure previously explained is made through a small aperture, such as the f/90.

The order in which the exposures are made is immaterial, because the effect of the exposures is cumulative. It is good practice, however, to follow a definite routine of procedure to avoid errors in timing or sequence.

Time—Time is a definite factor covering several different elements, such as emulsion, screen and light speeds, processing and exposures. Because of the accuracy of control necessary in certain operations, timers of several kinds have been developed. Interval timers are adjustable to ¼ min. intervals and are equipped with sounding alarms which are heard when time is up. These are generally used for long exposures or periods of development.

The sweep second timer is preferred for close control in negative development because of its readily visible sweep second hand. The electric interval timer automatically stops the exposure when the time cycle has been completed, and is used when repeated exposures of similar time duration must be made.

Exposure and development time comparators are made by exposing and developing test strips of photographic films, plates and papers. These test strips provide a visible means of predetermining exposures and development periods.

Time, because of its importance and interrelationship to the various factors

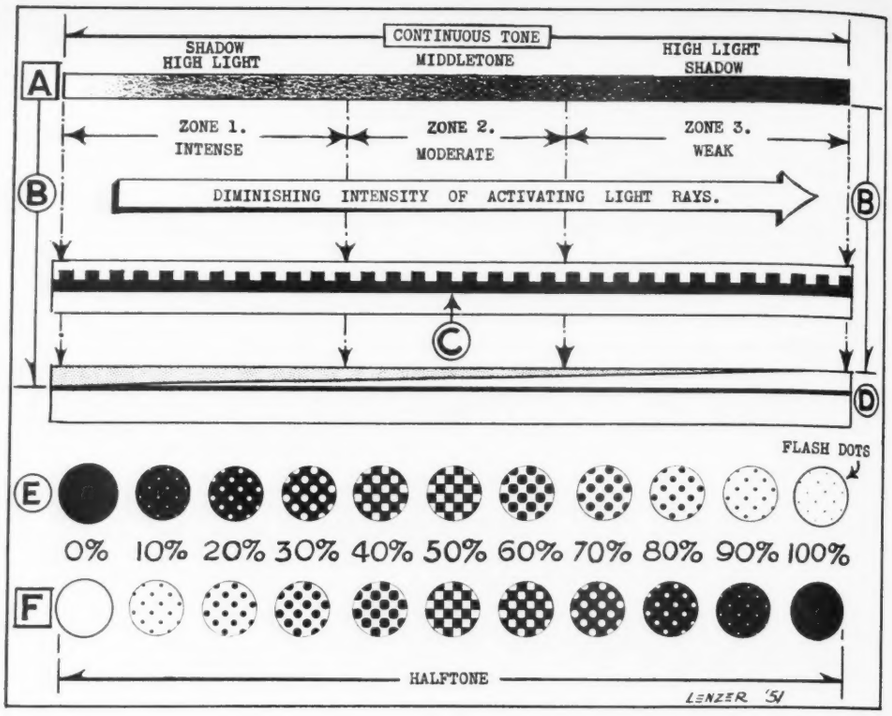


Fig. 27. - Chart analysis of continuous tone copy and what occurs when it is exposed to light under proper conditions through a halftone screen to the sensitized surface of a film or plate. The row E is representative of the resultant haltone negative. At F is shown a positive, obtained by contact exposure under proper light to the positive.

A represents continuous-tone copy, opaque photo print, wash drawing, water color, a positive or negative transparency, or other copy. As original copy, the overall tonal range is divided into three general classifications such as (1) Highlights, (2) Middletones, and (3) Shadows. If the copy is a negative transparency, then the tonal range classification is reversed *i.e.*, 1, shadows; 2, middletones, and 3, highlights.

B indicates the distance activating light rays must travel to affect the light-sensitive emulsion. The intensity of activating light rays diminishes in proportion to the transmitting, reflecting, withholding and absorbing properties of the copy. Variations in light reflection or transmission can be roughly divided into three zones: (1) Intense light reflection or transmission, (2) Moderate light reflection or transmission, and (3) Weak light reflection or transmission.

C represents a grossly exaggerated cross-section of a glass halftone screen. The light being screened is subjected to the phenomena of reflection, refraction, diffusion, defraction, absorption and transmission. (See *The ABC of Offset. III—Light, Printing Equipment Engineer*, May 1950.)

D represents a photographic film or plate. The shaded area represents the depth of light penetration within the light-sensitive emulsion.

E represents a resulting halftone negative. The circles of enlarged dot formations represent and are indicative of the halftone reproduction of the original copy A. The indicated Flash Dots are the result of an exposure to a white curtain or a special flash light unit, and is not obtained by photographing the original copy.

F represents a contact positive obtained by contact exposure to the halftone negative. The readings 0% to 100% are applicable to both negative and positive, and in the same order of presentation. The term *Halftone* applies to the entire tonal range including the highlights and shadows.

and procedures, merits the best of timing devices obtainable.

Black and White Screen Angles

Because of a peculiar quirk in human vision, halftone dots formed with a screen at an angle of 90 deg. create a cross line pattern which is seen by the human eye, but is not perceptible when the pattern is formed by the screen at a 45 deg. angle.

Rectangular screens are so made that the screen rulings are automatically at a 45 deg. angle, when the screen is placed in position in the camera. For all black and white reproduction, circular screens should be set at the 45 deg. angle.

A Good Reproduction

A good halftone reproduction is assured when all the factors effecting dot formation have been correctly observed. Correct illumination, lens aperture, focus, screen, distances, exposure and development will produce a negative with good rendition of tonal range. The dots will be sharp and opaque and will range in size from pinpoint dots in the shadows, through well defined middletones to the tiniest transparent pinpoint dots in the highlight areas.

(*To Be Continued*)

Recommended Reading:

Process Photography and Plate Making, J. S. Mertle, Cramer Dry Plate Co., St. Louis.

Photography and Platemaking for Photolithography, I. H. Sayre. Lithographic Textbook Publishing Co., Chicago.

Kodak Reference Handbook, Eastman Kodak Co., Rochester, N. Y.

The ABC of Offset for Letterpress Printers, Printing Equipment Engineer, April 1950

New Address

It has been announced that Amsterdam Continental Types and Equipment, Inc. has been moved to new quarters. The company is now located at 268-276 Fourth Ave. at 21st St., New York 10, N. Y. In the expanded showrooms and offices displays of both specialized machinery and equipment, as well as Typefoundry Amsterdam types, will be on view.

Apex Acquisition

William C. Walsh and Oscar Ianniello of Apex Printing Machinery Co., Inc., have announced the acquisition of the entire Linotype Dept. of the Margach Mfg. Co. from Herman Diamond. The full stock of Linotype parts and equipment, including machine shop equipment and tools, have been moved and set up in Apex's plant at 207-209 Wooster St., New York, under the supervision of Frank Spencer.

EXECUTIVE Cs

The appointments were recently announced of E. C. Corson, jr., as Credit Mgr. of the San Francisco territory, and Charles W. Devan as Credit Mgr. for the Whiting, Ind., Detroit and St. Louis offices of Federated Metals Div., American Smelting and Refining Co. Corson's territory includes Portland, Seattle and Salt Lake City.

Charles A. Beachler, appointed to the midwest sales organization of E. P. Lawson Co., according to an announcement by D. W. Schulkind, President. Beachler will operate out of Lawson's Chicago office and will cover the states of West Virginia, Ohio, Indiana, Kentucky and Illinois. A graduate of Ball State Teachers College and a veteran of World War II, he was recently associated with the H. Blacker Printing Inks Co. as sales representative.

Edward M. Gottschall, formerly managing editor of the *Graphic Arts Production Yearbook* and associate editor of *Printing News*, has joined the sales staff of Davis, Delaney, Inc., New York. Gottschall is a graduate of City College of New York and Columbia University. He is a veteran of World War II, a member of the Intl. Graphic Arts Educational Assoc., and a lecturer on printing processes and copy preparation at Pratt Institute, Brooklyn, N. Y. It was announced that he will continue to serve the *Production Yearbook* as a technical and editorial consultant.

Joseph F. Boden, appointed Denver Sales Representative for Miehle Printing Press & Mfg. Co., according to Carlton Mellick, Vice President in Charge of Sales. Boden's territory will include Wyoming, Colorado, New Mexico, western Kansas, western Nebraska, the city of El Paso, Tex., with a central office located in Denver. He is a graduate of Columbia University, a veteran of World War II, and most recently worked in Miehle's New York territory.

Joseph Cavanagh has been appointed Purchasing Agent of the Ink Div. of J. M. Huber Corp., according to J. S. Hart, Vice President of the Ink Div. and Edward N. Krech, Huber's Director of Purchases. He will be located at the main office of the Ink Div. at 620 62nd St., Brooklyn, N. Y. Cavanagh received his chemical engineering degree from Fordham University in 1942 and was vice president of the Cavanagh Chemical Co. prior to joining Huber. He was manager of the Huber Rotogravure Laboratory, and assistant purchasing agent before this present appointment.

John C. Dabney, Eastern District Manager for Harris-Seybold Co., has been appointed Director of Marketing for the company. According to Ren R. Perry, General Sales Manager, Dabney will make his headquarters in Cleveland and will continue as Manager of the 12 state Eastern district area. With Harris-Seybold since 1939, Dabney has also served as sales manager of the Seybold division and assistant manager of company sales.

Max Lousin (left) has been elected President of Bensing Bros. & Deeney, Inc., and Robert H. Bensing (right) has been elevated to the post of Vice President. Lousin has been associated with BBD since 1939, serving as general manager of the company's Chicago plant and sales director for the midwest and west. He was educated at William Penn College, Iowa State College and Northwestern University. Bensing is the son of Harold Bensing, one of the company's founders. A graduate of Dartmouth College and a veteran of World War II, he joined the company in 1948. He has been a member of the BBD sales staff in the Chicago territory.

The appointments of Paul Reeves as Director of Sales and Seward T. Salvage as Advertising Manager of Timken Roller Bearing Co., has been announced by W. B. Moore, Vice President in Charge of Sales. Reeves, a graduate of Carnegie Institute of Technology, joined Timken in 1929 and has served in the company's Chicago and San Francisco offices. He has also held the posts of sales promotion manager and advertising manager for Timken. Salvage previously served in Timken's Pittsburgh, Los Angeles, Cleveland and Houston offices. He is a graduate of John B. Stetson University in DeLand, Fla. Since 1949, he has served as Timken's sales promotion manager.

William J. Hogan, New York Mgr. and head of the Eastern Offset Press Div. of Miehle Printing Press & Mfg. Co., recently was elected a Vice President of the company, according to J. E. Eddy, President. Hogan joined Miehle in 1925 as a technical advisor on offset printing. He later served as assistant to the late Charles P. Titsworth, then vice president in charge of Eastern Offset Press sales, before becoming Miehle's New York Manager.

The following officers of Burgess Cellulose Co. were elected recently at the Annual Stockholders' Meeting held in Freeport, Ill.: President, Victor E. Fishburn; First Vice President, L. A. Giessel; Second Vice President, Kenneth G. Myers; Treasurer, Ray M. Kendle; and Secretary, O. W. Storey. Elected to the Board of Directors were Jackson Burgess, John Dern, Mr. Fishburn, B. S. Reynolds, A. W. Schorger and Mr. Storey.

W. M. Nickerson has been appointed Credit Manager of the Houston, Tex., office of Federated Metals Div., American Smelting and Refining Co.

Norman A. Strang, has been appointed Advertising Mgr. of SKF Industries, Inc., according to Robert R. Zisette, General Sales Manager. He succeeds Robert C. Byler, who died recently from a heart attack. Strang joined the SKF organization in 1940 and later served for three years with the U. S. Coast Guard. He returned to SKF's advertising department in 1945 and was named assistant advertising manager in 1950.

Continued on Page 42

Alert Management

Moves San Antonio (Tex.) Clarke Printing Co. into own one-floor building—Workflow streamlined and equipment modernization program adopted

By STAFF WRITER

THIS is a story about San Antonio's Maverick-Clarke commercial printing firm which has gone through six major expansions since the company was founded 75 years ago. More specifically, the story is related to the moving of the company's printing division, The Clarke Printing Co., into new quarters. Many changes in our national economic structure have occurred in that 75 year period. These changes are related potently to the commercial printing business. Also, peculiar problems of the industry are changing plant management techniques and equipment obsolescence. It is to the credit of Maverick-Clarke in San Antonio, Tex., that its printing subsidiary, The Clarke Printing Co., has been moved to new quarters, its plant layout and workflow have been streamlined, and an equipment modernization program has been adopted.

Extensive Organization

The Maverick-Clarke organization spreads extensively over the State of Texas through various branches, all of which are connected to the home office in San Antonio by Teletype service.

In addition to its San Antonio Divisions, the company also maintains an office furniture and supplies store and a printing plant in Houston, and office furniture and supplies stores in Corpus Christi and Brownsville. Sales representatives are maintained in Dallas, Waco, Beaumont, Abilene, Pharr and Tyler, Tex.

The business offices and retail store of Maverick-Clarke are located at 215 E. Travis St. in downtown San Antonio. The printing plant operated by the subsidiary company, The Clarke Printing Co., is located at 5101 South Zarzamora St.

An intercommunicating system is maintained between the downtown business offices of Maverick-Clarke on East Travis St. and the printing plant on Zarzamora St. An automobile shuttle service also permits transportation of copy, cuts and other materials between the downtown office and the printing plant.

Printing is executed by letterpress and offset processes. The variety of work is extensive. Aside from the office furniture and supplies business, the firm produces blank books, fine stationery for business and social use, publications, brochures and folders, ledger sheets, and quite extensively, does check printing and imprinting work.

RUSSELL C. HILL

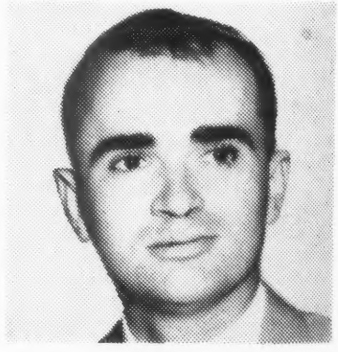
is President of Maverick-Clarke, parent company in San Antonio, Tex., having several divisions in different Texas locations. Maverick-Clarke had 60 employees in 1926 when he joined the company. Under his leadership there are now 300 employees. Divisions have been established in Corpus Christi, Houston and Brownsville. Sales representatives cover a large part of Texas from headquarters in Abilene, Beaumont, Dallas, Waco, Pharr and Tyler.

Hill is credited for the part he played in the erection of many of San Antonio's principal buildings. From 1913 to 1926, prior to becoming associated with Maverick-Clarke, he was engaged in a general real estate business, specializing in business property. Many other business accomplishments have been credited to him. He has held many civic posts.

One-floor Building

The one-floor warehouse type building is 125 ft. wide and 400 ft. long. The front elevation of the building to a depth of 320 ft. is used. The current floor space requirement is 40 thousand sq. ft. and the remaining 10 thousand sq. ft. will be used for storage purposes until such time as plant expansion requires its use. There are no partitions in the building.

The building is situated immediately adjacent to a spur track connected with the Missouri Pacific Railway. Freight cars may be spotted to facilitate easy loading and unloading directly opposite the loading dock.



ROGER C. HILL

is president of Clarke Printing Co., the operating subsidiary for Maverick-Clarke's printing plant which recently has undergone expansion and equipment modernization and is now housed in new quarters. Hill is also Vice President of Maverick-Clarke. He is a son of Russell C. Hill, President of Maverick-Clarke.

It is related that Roger Hill began his career with Maverick-Clarke by sweeping floors during school vacations. He attended TMI in San Antonio and later Texas A&M. He was graduated from the University of Texas at 18 and then entered Harvard Graduate School of Business Administration to get his degree of Master of Business Administration.

During World War II, he served 30 months with the army overseas where he was executive officer at the headquarters command controlling Paris and surrounding area.

Hill is married and has 3 children, enters into civic activities.

Employee Welfare

Two major employee benefit projects are in effect. In 1941, Russell C. Hill, President of Maverick-Clarke, inaugurated a profit-sharing program for all employees. This program in 10 years has resulted in a pension and trust fund with assets valued at $500 thousand.

Credit to Greer

The entire management personnel of Maverick-Clarke gives credit to Robert Royden Greer, Los Angeles Printing Engineer, who was engaged to supervise the most important expansion and modernization move in the company's long history. Greer spent four weeks conferring with management, department heads and employees in formulating and drawing plans for the new plant and in obtaining opinions of employees about the new equipment needed. In addition to designing the various departmental equipment layouts with each foreman, it was Greer's task to integrate and coordinate them into a workable plan for the entire plant.

Continuing Study

"Since we have moved into the new plant," said Roger C. Hill, President of Clarke Printing Co., "we are devoting a continuing study to equipment replacement. This study is conducted in addition to a critical attitude on the part of all of our executives to find ways to reduce manufacturing costs and to introduce work simplification ideas. We are increasingly conscious of the necessity for replacement or modification of existing equipment to eliminate bottlenecks, particularly since we have streamlined our workflow throughout the plant. We are also conscious of the importance of certain types of what might be called accessory equipment such as high-speed quoins, more efficient lighting equipment, pre-makeready equipment, press spray guns, mobile tables and trucks for moving work in process from one processing unit to the next, chairs and the like, to name a few."

J. HAYDEN KEENAN

is Printing Sales Mgr. of the San Antonio and Country Divisions and is also Supervisor of the Estimating Dept. He is widely respected throughout the printing industry. The Printing Industry of America has selected him as an instructor in estimating costs. He has taught classes both in Dallas and San Antonio. The Maverick-Clarke management gives much credit to Mr. Keenan for his activity in the success of the company.

Reducing Factory Costs

By way of illustrating some of the problems existing in the plant, it was found that reduction of factory costs could be accomplished by adopting work simplification methods. Clarke management considered the cost of furnishing reproduction proofs to its offset platemaking department. The cost of these proofs was found to be excessive. During one month last year a considerable quantity of reproduction proofs was produced. The type, of course, was set in the composing room. The forms were combined four or five to a group to make it worthwhile to put them on a Miehle 22 in. by 34 in. press to secure necessary proofs for the four or five jobs. The imposing man locked these various forms in 22 in. by 34 in. cylinder chases. The lockup time for a large group of forms represented about 45 hr. and the after-press unlocking time represented about 15 hr. Thus there were 60 hr. of time at $6 per hr. cost. Total lockup time cost $360.

The presswork on the cylinder could not be done by one man in less than 40 hr. at $5.50 per hr., or a total cost of $220. The combined operations would cost $580 for reproduction proofs made in that one month.

After installing a No. 4T Vandercook proof press, the cost of taking the equivalent number of reproduction proofs checked out as follows: A single proof was taken in 3 min. because it was proved by the compositor at once. This prompt service meant elimination of customer delays. The time spent in getting together four or five forms previous to starting lockup for the cylinder press equalled the time necessary to pull the reproduction proofs on the Vandercook proof press. The greater part of the imposition time and all of the cylinder press time were eliminated. One-half the cost of locking up and unlocking the forms for the cylinder press (on a conservative basis) more than covered the entire proving cost on the new proof press. But, assuming that the cost was double, then it equals the cost of what it takes for the imposing time before the proof press was installed—or $360.

Thus there is no further labor cost as represented in the cylinder press time of $220. With the Vandercook proof press good customer service is given at a saving of $220 per month. The entire proof press installation cost was paid for in eight months time.

While it is not necessary to go into detail with respect to the equipment purchases, yet every six months after installation the reproduction proof press equipment has paid for itself. With respect to the new way of taking reproduction proofs, on a conservative basis, the savings amount to at least $14 hundred. This amount has been applied to the purchase of Ludlow and Elrod equipment.

E. LYLE HAUCK

is Vice President and Plant Manager. He is 54, is married and is proud of four grandchildren. His hobby is farming. He owns an attractive place near San Antonio. Has been connected with printing industry for 35 years in bookkeeping, cost accounting, credit manager, salesman, public relations and co-owner of a printing business. Was secretary-treasurer of a large bindery for several years. He was Clarke's Houston Division Manager for several years.

Offset Pressroom

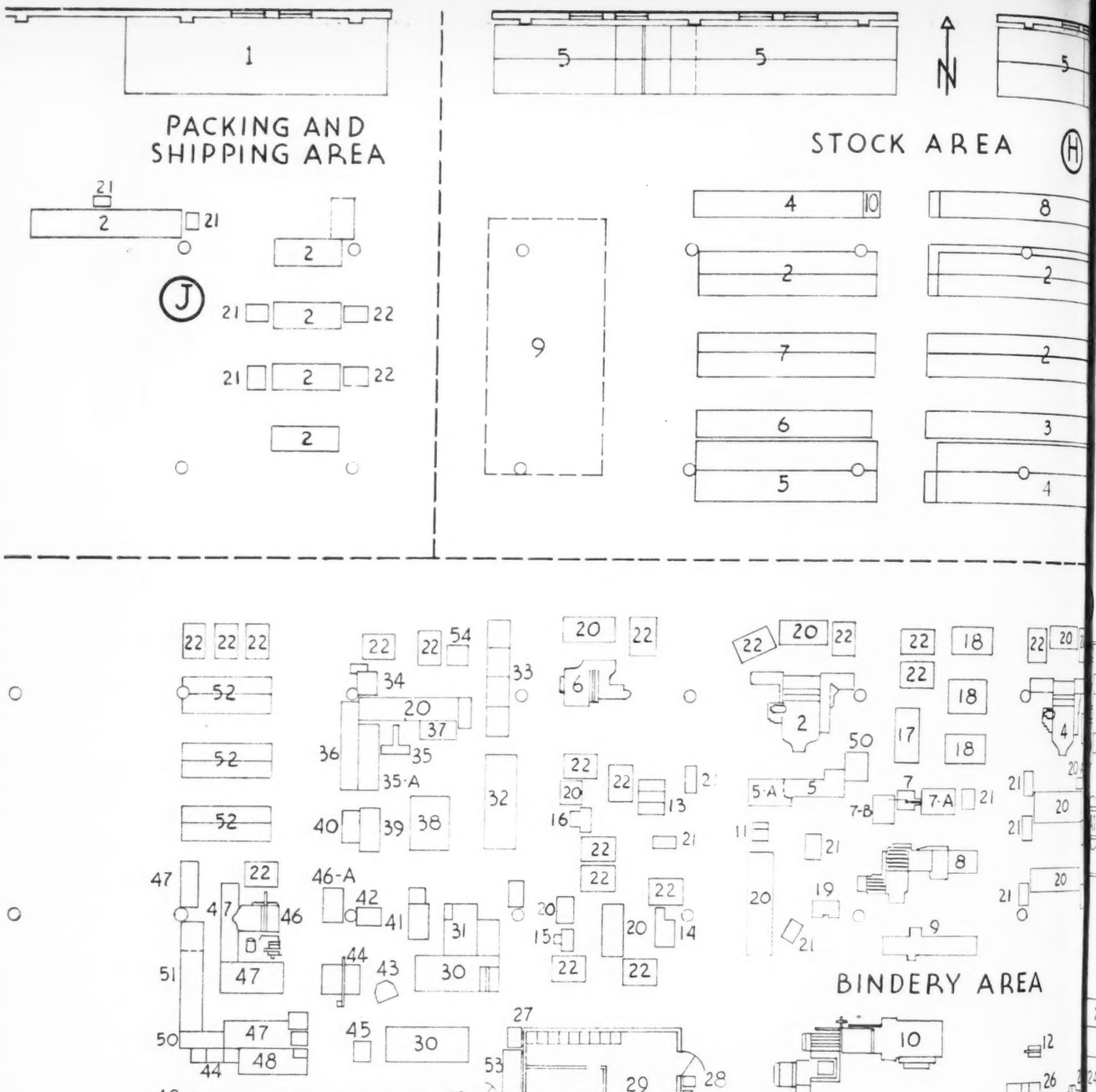
Symbolic of a condition that might occur in any plant is the case of two same-model offset presses.

In the offset pressroom, part of the equipment consists of two 17 in. by 22 in. Harris presses. One of these is nearly new —the other is older. The older press was in need of repairs to enable the pressman obtain good register. Gradually, it became the custom in the pressroom to put register work on the newer press. This meant, of course, a production overload on the newer press while the older press carried a light work load. The production leak has been eliminated by having the older press overhauled.

In the new plant, an individual table and ink slab have been provided for each press. The tables provide, to some extent, privacy of equipment for each pressman. The space provided for press sheets permits the pressman to examine the press sheet for quality of work while the press is running. In the space beneath the top, drawers and shelves have been provided. Space has also been provided for a small ink stone. These were designed for such materials, tools and personal property as are needed by an offset pressman.

Workflow and Aisle Widths

Printing Equipment Engineer regrets the necessity for reproducing the Clarke Printing Co.'s plant layout and workflow diagram in bastard scale reduction. However, we feel that our readers will have no difficulty in analyzing the excellence of the plan.



Floor Plan Layout of Clarke Printing Co., Division of Maverick-Clarke, San Antonio, Tex.

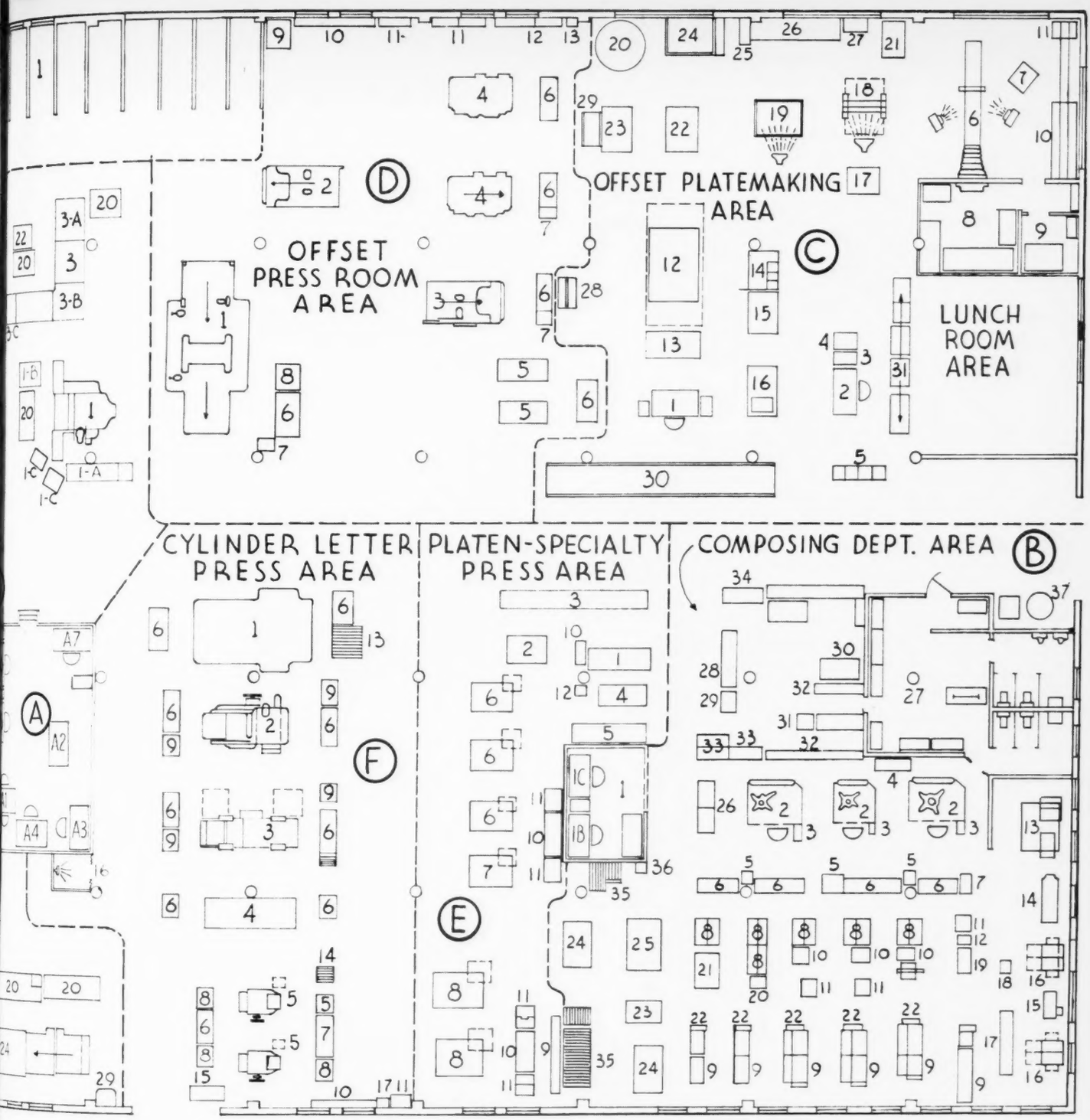
A —Plant Manager's Office
A1—Plant Manager
A2—Production Manager
A3—Office Mgr. and Paper and Supplies Buyer
A4—Bindery Foreman
A5, 6, 7—Clerical

B—COMPOSING ROOM AREA

1.—Composing Room and Pressroom Foremen
1a.—Composing Room Foreman
1b.—Letterpress Pressroom Foreman
2.—Intertype machines
3.—Copy stands
4.—Parts and liner cabinet
5.—Magazine racks
6.—Dumps
7.—Nolan proof press
8.—Galley cabinets
9.—Type cabinets
10.—Two-col. galley cabinets
11.—Saw-trimmers
12.—Saw cabinet
13.—Monotype Material Maker
14.—Elrod Strip Caster
15.—Ludlow machine
16.—Ludlow matrix cabinets
17.—Work top with strip material storage underneath
18.—Ludlow surfacer
19.—Strip material cabinet
20.—Mono-Tabler broach
21.—Hand proof press
22.—Furniture cases
23.—Lockup and material cabinet
24.—Steel top 39 in. by 65 in. imposing tables
25.—Steel top 51 in. by 75 in. imposing table
26.—Wood type cabinet
27.—Locker, wash and toilet room
28.—Vandercook proof press
29.—Table
30.—Proofreaders' desks (2) and bookcase
31.—Small cut cabinet with Hacker Gauge on top
32.—Cut shelves
33.—Galley cabinets (10x16)
34.—New cut cabinet
35.—Form racks
36.—Drinking water
37.—Metal remelting

C—OFFSET PLATEMAKING AREA

1.—Foreman's desk
2.—Artist
3.—File
4.—Art cabinet
5.—Files
6.—Darkroom camera (31 in.)
7.—Rolling copy table (30 in. by 36 in.)
8.—Camera dark room with temperature controlled sink
9.—Contact vacuum printer
10.—Sink with negative drying wires overhead
11.—Glass top table
12.—Step and Repeat machine
13.—Large chase for S&R machine
14.—Small S&R machine chase table
15.—Glass top layout table
16.—Cutting board
17.—Register table
18.—Vacuum frame (22 in. by 34 in.)
19.—Vacuum printing frame (35 in. by 45 in.)
20.—25 in. by 45 in. whirler
21.—17 in. by 22 in. whirler
22.—Rub-in table on wheels (45 in. by 60 in.)
23.—Gum-up table on wheels (45 in. by 60 in.)
24.—Plate sink (50 in. by 60 in.)
25.—Chemical shelves
26.—New plate rack, two tiers high (3 ft. by 10 ft. 6 in.)
27.—Sink (17 in. by 22 in.)
28.—Plate rack (22 in. by 28 in.)
29.—Plate rack (17 in. by 22 in.)
30.—Live plate storage
31.—Negative files



8.—Kluge 12 in. by 18 in. platen presses
9.—Roller rack and ink cabinet
10.—Pressmen's organizing tables
11.—Rolling trucks
12.—Dump

F—CYLINDER LETTERPRESS AREA

1.—Miehle No. 1 press (38 in. by 50 in.)
2.—22 in. by 34 in. Miehle press
3.—No. 29 Miehle press (22 in. by 28 in.)
4.—Kelley press (17 in. by 22 in.)
5.—Miehle Vertical presses (14 in. by 20 in.)
6.—Tables
7.—Vertical pressman's table
8.—Rolling trucks
9.—Flat trucks
10.—Ink and roller cabinet
11.—Double sink
12.—Rack for Kelly press forms
13.—Cylinder press rack
14.—Vertical press form rack
15.—Personalized-check area
16.—Cylinder press markout booth
17.—Water fountain

G—BINDERY AREA

1.—50 in. Seybold Precision cutter; 1a.—Rack; 1b.—Flat table, 1c—Flat trucks
2.—Paper cutter
3.—Rotary perforator; 3a.—Feeder; 3b.—Turntable; 3c.—Delivery
4.—Auto-Spacer cutter (50 in.)
5.—Brackett stripper; 5a.—Table on casters; 5b.—Special table
6.—Brackett trimmer (50 in.)
7.—Champion stitcher; 7a.—Table with shelves; 7b.—Special table
8.—Cleveland 00 folder
9.—Baum folder
10.—Cleveland B folder
11.—Boston No. 2 stitcher
12.—Boston No. 7 stitcher
13.—Scoring machine
14.—Wright punch
15.—Paper drill
16.—Seybold round cornering machine
17.—Padding table with shelves for board and compound
18.—Padding racks on casters
19.—Anderson banding machine on rolling table
20.—Tables
21.—Signature trucks
22.—Skids
23.—Carbon cabinet
24.—Hickok ruling machine
25.—Latham straight perforator
26.—Slot perforator
27.—Sink
28.—Water fountain
29.—Women's rest room
30.—Binders' table with gumming and gluing equipment
31.—Marbling table
32.—Markup table
33.—Wire-O-binding cabinet
34.—Wire-O punch
35.—Paging machine; 35a.—Paging table
36.—Deed record binders
37.—Coupon cabinet
38.—Sewing machine
39.—Sewing table
40.—End sheet cabinet
41.—Press board cabinet
42.—Standing press
43.—Backing machine
44.—Press board cabinet
45.—Standing press
46.—Paper cutter; 46a—Cutter table
47.—Blank book boards
48.—Finishing table
49.—Hot press
50.—Deed record binder and storage
51.—Storage cabinet for binders and fillers
52.—Book form cabinets
53.—Blank book makeups
54.—Press dolly

H—STOCK AREA

1.—Paper conditioning chambers
2.—Ledger racks
3.—Sulphites and bonds
4.—Miscellaneous broken ream shelving with skid space underneath
5.—Pallet and skid storage
6.—Customer bank stock
7.—Envelopes
8.—Pallets
9.—Pallet and skid storage
10.—Paper stock manager's desk

J—PACKING AND SHIPPING AREA

1.—Finished work held for future shipment
2.—Packing tables
21.—Signature trucks
22.—Skids

View in Plant Management, Pressroom and Bindery Sections, San Antonio's The Clarke Printing Co.

Printing Equipment Engineer regrets the necessity for reproducing this floor plan layout on pages 28 and 29 in bastard scale and in small dimension. The original blueprint was drawn to ¼ in. per ft. scale and measured over four times the size of this reproduction. However, those of our readers who make a study of workflow, aisle widths, supervisory location, and the like will have no difficulty in analyzing this extremely interesting treatment of an interesting commercial printing plant. This layout is the result of work done by Robert Royden Greer, Los Angeles printing engineer.

The Clarke Printing Co. executes work by the letterpress and offset printing processes. Among the major items produced are publications, displays, fine stationery of all kinds, embossing, bookbinding, blank books for records, a large variety of bank checks and miscellaneous commercial printing.

Front elevation of the building 320 ft. long is used. About 40 thousand sq. ft. of floor space is utilized in this plant. The remaining 10 thousand sq. ft. of floor space is used for storage purposes by the parent Maverick-Clarke company.

The plant has been divided by the dash lines to indicate the nine mechanical departments, from A to J respectively.

It will be noticed that work is done by letterpress and offset processes. All work is initiated in Plant Manager Hauck's office, *A*, which is located centrally to permit competent supervision. Overall plant supervision is tied in closely at minimum radial distances from the plant manager's office.

In considering this layout, it will be seen that the composing room foreman is tied in closely with both the letterpress and offset departments. The bindery is a compact unit segregated from the composing room but is adjacent to the letterpress and offset press departments and at the same time is adjacent to the packing and shipping departments. Likewise, the paper stock area has been located as closely as possible to the respective pressrooms to which it must deliver paper stock. In any event, this is a fine example of what is meant by Straightline Workflow. The work progresses through the plant in a smooth path, does not back up, and finally reaches the Packing and Shipping Area—*J*, from which the packaged jobs can be delivered to the loading dock.

Aisle Widths

Aisle widths in different types of plants may vary considerably. There can be no standard width with respect to an aisle which must accommodate any certain type or frequency of operation. The main requirement is that movement of men and materials about the plant should permit freedom of passage without interference of any kind or the necessity for any worker to change his position momentarily while material is being transported through the aisle occupied by him.

General Aisle Areas—The main aisle running laterally through the plant is 11 ft. wide throughout the length of the plant. This width permits transporting materials freely from one department to another.

The aisle adjacent to the right side of the Plant Manager's office is 9 ft. wide. The main aisle between the Plant Manager's office and adjacent bindery equipment without signature trucks next to the tables is 9 ft. 6 in.

Composing Room — The Composing Room is supervised by Clarence A. Winters. Since the major part of composition is executed on line-slug machines, work moves across the lateral aisles rather than through them. Lateral aisles are 3 ft. 6 in. wide, while the working space between type cabinets with work tops is 4 ft.

Offset Dept.—"The aisle widths and spaces between the different pieces of equipment," stated Foreman Robert B. Perry, "are more than ample, particularly in the offset press area where space has been provided for future press expansion." This brings up a point which may enter the reader's mind. The floor area around the presses is needed to accommodate the many skids that contain paper for one job going through a press more than once.

(*Continued on Page 41*)

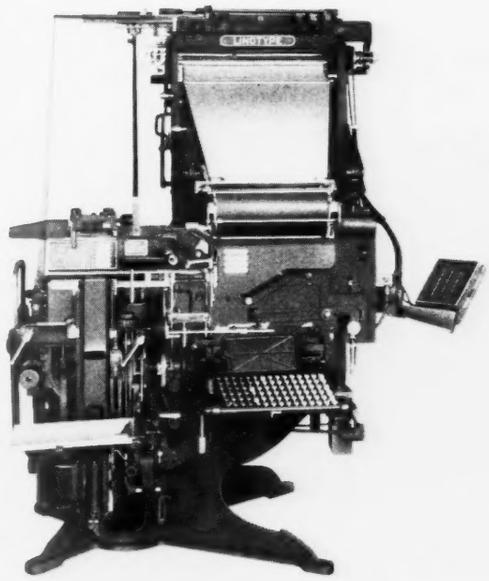
LINOTYPE SCORES AGAIN!

MODEL 29 and 30 MIXER LINOTYPES

Newly Engineered

for easier operation, simpler maintenance, higher production!

You saw the speedy new Blue Streak Comet at the Graphic Arts Exposition in Chicago . . . more recently, you read about the newly improved Wide Range Linotypes . . . NOW, the standard mixer Linotypes, Models 29 and 30, have been improved by this same careful research and testing. That means greater ease and safety of operation, simpler maintenance, and stepped-up production! Mixing text and display faces right at the keyboard is easier than ever! Makeup and other floor work is greatly simplified. Your marginal jobs will turn into real profit-makers!



Model 29 is available with two or four 90-channel magazines or with combinations of 90- and 72-channel magazines. Model 30 has the additional capacity for four 34-channel auxiliary magazines.

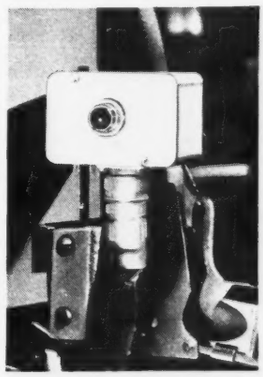
LOOK AT THESE FEATURES!

NEW FEATHER-TOUCH MIXING CONTROL permits continuous keyboarding of text and display faces. Matrices can be mixed at the touch of a convenient lever. The carefully counterbalanced mechanism functions with exceptional smoothness and speed.

NEW ELECTROMATIC SAFETY SYSTEM guards matrices and machine from damage. The elevating mechanism is automatically and instantly locked when matrices are in distributor box or on distributor bar.

NEW SWINGING KEYBOARD ROD FRAME on models with 72- and 90-channel magazines brings proper set of keyboard rods into position when mixing control is shifted. Action is direct and positive.

MAGAZINE ELEVATING MECHANISM improved to make shifting easier than ever. Simple design and sturdy construction makes maintenance a breeze.



Green light signals when it's safe to shift.

ASK YOUR LINOTYPE PRODUCTION ENGINEER FOR COMPLETE DETAILS ABOUT MIXER MODELS 29 AND 30!

• LINOTYPE •

LEADERSHIP THROUGH RESEARCH

Set in members of Erbar, Corona and Spartan Families

MERGENTHALER LINOTYPE COMPANY
29 Ryerson Street, Brooklyn 5, New York

Conference Dates *(with organization names and principal officers)*

American Photoengravers Association — 1951 Convention, Netherland Plaza Hotel, Cincinnati, O., October 8, 9 and 10. W. K. James, President; Frank J. Schreiber, Executive Secretary, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference—1951 Conference, Edgewater Beach Hotel, Chicago, June 11, 12 and 13. Chairman of the Committee, L. J. Griner, Production Manager, Detroit *News*. Manager ANPA Mechanical Dept., Vernon R. Spitaleri, 370 Lexington Ave., New York 17, N. Y.

Fifth District Craftsmen's Conference — 1951 Conference, Claypool Hotel, Indianapolis, Ind., June 15 and 16. President, J. H. Clendenin, Indianapolis Blue Print Co., Inc., 600 E. Ohio St., Indianapolis, Ind.; Secretary-Treasurer, Robert Wolf, Richardson-Taylor-Globe Co., 4501 Mitchell Ave., Cincinnati 32, O.

Great Lakes Newspaper Mechanical Conference—1952 Conference, Hotel Statler, Detroit, January 13, 14 and 15. President, Joseph E. McMullen, Asst. Production Manager, Milwaukee (Wis.) *Journal;* Secretary, Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press;* Chairman, Mfrs. and Suppliers Committee, Edgar Flint, Howard Flint Ink Co., Clark Ave. & M.C.R.R., Detroit 9, Mich.

Illinois Newspaper Mechanical Conference—1951 Conference, Hotel Kaskaskia, LaSalle, Ill., September 22 and 23. President, John Barron, La Salle (Ill.) *News-Tribune;* Secretary-Treasurer, Wilbur L. Augspurger, Peoria (Ill.) Newspapers, Inc.

Intl. Assoc. Electrotypers & Stereotypers — 1951 Convention, Kenmore Hotel, Boston, Mass, October 23, 24 and 25. 1951 Spring Conference, Hotel Cleveland, Cleveland, April 12 and 13. A. P. Schloegel, Executive Secretary, 701 Leader Bldg., Cleveland 14, O.

International Association of Printing House Craftsmen—1951 Convention, Statler Hotel, Boston, Mass., August 19, 20, 21 and 22. President, Fred C. Baillie, 21 Iona, Ottawa, Can.; Executive Secretary, Pearl E. Oldt, 18 E. Fourth St., Cincinnati 2, Ohio.

International Graphic Arts Education Association—1951 Conference, Hotel Statler, Cleveland, O., June 17, 18, 19 and 20. President, George J. Bilsey, East High School, Cleveland, O.; Educational Director, Fred J. Hartman, 719 Fifteenth St., N. W., Washington 5, D. C.

International Typographic Composition Association—1951 Convention, Hotel Windsor, Montreal, Can., September 13, 14 and 15. President, O. B. Powell, General Manager, A-1 Composition Co.; 155 E. Ohio St., Chicago; Frank M. Sherman, Executive Director, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference — 1951 Conference, Hotel Montrose, Cedar Rapids, Iowa, May 5, 6 and 7. President, L. T. Caldwell, Stereo Supt., Cedar Rapids (Ia.) *Gazette;* Secretary-Treasurer, Paul F. Kamler, Mechanical Supt., Clinton, (Ia.) *Herald.*

Kansas Newspaper Mechanical Conference — 1951 Conference, Broadview Hotel, Wichita, Kan., September 15 and 16. President, Glenn Cummins, Wichita (Kan.) *Eagle;* Secretary-Treasurer, Larry Miller, 701 Jackson St., Topeka, Kan.

Lithographers National Association—1951 Convention, Spring Lake, N. J., during the week starting June 25. Executive Director, W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Mechanical Conference—1952 Conference, Bellevue-Stratford Hotel, Philadelphia, March 20, 21 and 22. Jointly sponsored by the New Jersey Press Assoc. and the Pennsylvania Newspaper Publishers Assoc. Conference Director, Theodore A. Serrill, PNPA General Mgr., 209 Telegraph Bldg., Harrisburg, Pa.

Missouri Newspaper Mechanical Conference — 1951 Conference, Bothwell Hotel, Sedalia, Mo., October 20 and 21. President, Earl H. Barker, Composing Room Foreman, St. Louis (Mo.) *Star-Times;* Secretary-Treasurer, O. K. Hammitt, Mechanical Supt., Moberly (Mo.) *Monitor-Index.*

National Association of Litho Clubs — 1951 Convention, Hotel Cleveland, Cleveland, O., May 11 and 12. General Convention Chairman, Herb Johnson, A. S. Gilman, Inc., 623 St. Clair Ave., N. E., Cleveland, O. Executive Secretary, William J. O'Holleran, Assistant Supt., Myercord Co., 5339 W. Lake St., Chicago 44, Ill.

National Association of Photo-Lithographers — 1951 Convention, Statler Hotel, Buffalo, N. Y., September 5, 6, 7 and 8. Executive Vice President, Walter E. Soderstrom, 317 West 45th St., New York 19, N. Y.

National Printing Equipment Association, Inc. — President, R. Verne Mitchell, Harris-Seybold Co., 4510 E. 71st St., Cleveland 5, O.; James E. Bennet, Secretary, 140 Nassau St., New York 7, N. Y.

New England Mechanical Conference — 1951 Conference, Statler Hotel, Boston, November 3 and 4. President, Howard E. Simons, Waterbury (Conn.) *American-Republican;* Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

Northwest Mechanical Conference — 1952 Conference, Hotel Duluth, Duluth, Minn., September 20, 21 and 22. President, John Breen, Mechanical Supt., Duluth, (Minn.) *Herald* and *News-Tribune;* Secretary-Treasurer, Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conference —1951 Conference tentatively set for Biltmore Hotel, Los Angeles, May 18, 19 and 20. President, L. M. Richardson, Mechanical Supt., Los Angeles *Herald-Express;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles *Daily News.*

Pacific Society of Printing House Craftsmen—1951 Convention, Hotel Westward Ho, Phoenix, Ariz., May 10, 11 and 12. President, Allison W. Manners, 4137 Fifth Ave., Los Angeles 43, Calif.; Secretary-Treasurer, Isadore Margolin, 8924 S. Gremmercy Pl., Los Angeles 44, Calif.

Printing Industry of America —1951 Convention, Hotel Statler, Boston, October 24, 25, 26 and 27. President, Robert H. Caffee, President, Wm. G. Johnston Co., Pittsburgh, Pa.; James R. Brackett, General Manager, 719 Fifteenth St., N. W., Washington, D. C.

Research and Engineering Council *of the Graphic Arts Industry, Inc.*—President, Frank F. Pfeiffer, Reynolds & Reynolds Co., 800 Germantown Ave., Dayton, O.; Official Headquarters, Bernard Taymans, 719 Fifteenth St., N. W., Washington 5, D. C.

SNPA (Eastern Div.) Mechanical Conference—1951 Conference, Atlanta Biltmore Hotel, Atlanta, Ga., August 27 and 28. Chairman, L. H. Pickens, Mechanical Supt., Greenville (S.C.) *News-Piedmont;* Secretary, Tom Tanner, c/o SNPA, P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conference—Chairman, Ralph Moffett, Mechanical Supt., Dallas (Tex.) *Times-Herald;* Conference Secretary Pro Tem, Mike Murray, 621 Texas Bank Bldg., Dallas 2, Tex.

Technical Association of the Lithographic Industry —(TALI)—1951 Meeting, Deshler-Wallick Hotel, Columbus, O., May 7 and 8. President, Dr. Marvin C. Rogers, Research Director, R. R. Donnelley & Sons Co., 350 E. 22nd St., Chicago; Secretary-Treasurer, Geo. W. Wilhelm, 814 N. East Ave., Oak Park, Ill.

New,

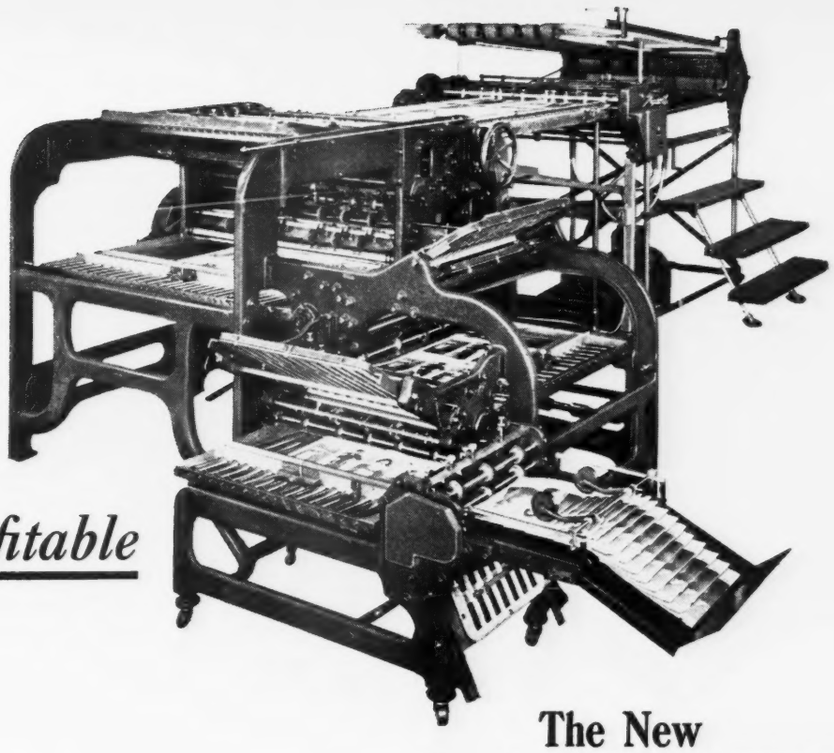
Larger,

Faster,

More Versatile

...and More Profitable

for all types of larger sheet folding



The New Cleveland Model "KK"

folds sheets up to 44 x 64" (parallel section) ... and up to 44 x 58" (right angle section) — covering practically the entire range of the requirements of the medium to large print-shop and bindery. Floor space 21'6" x 12'7"

With Model "KK" many jobs that formerly had to be done on blade type folders, may now be folded the fast, economical Cleveland way • Handling maximum size sheets from 42 x 56" cylinder presses, and half sheets from flatbed, cylinder and offset presses above the 56" size, KK's folded signatures include the wide range of folds used in direct mail pieces and other products of the commercial printer.

Speeds ... up to 325' (3,900") per minute
44 x 58" sheets—3,500 an hour maximum
38 x 50" sheets—3,900 an hour maximum
28 x 44" sheets—4,400 an hour maximum
25 x 38" sheets—5,200 an hour maximum
19 x 25" sheets—7,800 an hour maximum

Running at maximum and under normal stock and operating conditions, your Model "KK" should average steady production of 75 to 80% of the above figures.

Cleveland Air Wheel Continuous Feeder provides for continuous reloading without halting the machine, thus promoting maximum output. The feeder has variable speed device, adjustable while running (only one adjustment required); adjustable piling guides; sheet caliper which guards against feeding of more than one sheet at a time . . . and other important features.

Fold plates ... 4 in parallel section
4 in eight page section
2 in sixteen page section
1 in thirty-two page section

Equipment — includes diagonal roller feed table, swinging deflectors on all fold plates, diagonal roller Cross Carrier, stacker delivery, scorers, perforators and slitters.

Let us survey your folding problems and make recommendations.

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Modern Machines for Printers and Binders

Dexter Folder Company, General Sales Offices, 330 West 42nd Street, New York 18, N. Y.

Associated with the de Florez Company for Special Engineering

Branch Offices, Domestic and Foreign Agents

Equipment & Supplies

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT *Engineer*, 1276 West Third St., Cleveland 13, Ohio.

When writing to us about any of the items described, and to save your time, just mention in your request the PEE symbol which appears at the end of each description.

New ATF Type Faces

THREE new type faces, known as Reiner Script, Nobel Light and Nobel Light Italic, have been imported from Holland by American Type Founders. The type faces are the cuttings of Typefoundry Amsterdam and are cast on a full body for American use. Size range for these faces are: Reiner Script, 18 pt. to 96 pt.; Nobel light, 8 pt. to 72 pt.; and Novel Light Italic, 8 pt. to 48 pt. Specimen sheets are available from ATF branch offices or by mentioning PEE No. 68 in your request.

G-E Press Drive

APPLICATIONS of the ACA Adjustable Speed Press Drive to many types of commercial printing equipment are explained by General Electric Co. in an eight page, two color bulletin No. GEA-5568. The press drive is designed for service on both letterpress and offset sheet-fed, web-fed, and metal decorating presses, as well as on many types of bindery machines. G-E press drives are available in ratings from 3 to 50 h.p. and speed ranges of 3 to 1, 6 to 1, and 20 to 1. Illustrations and descriptions of the various components of the press drive are included. Installations of the drives on various printing equipment are also shown. Copies of this bulletin are available by mentioning PEE No. 73 in your request.

Automatic Casting Machine

FEDERATED Metals Div. of American Smelting and Refining Co., recently installed an automatic Castomatic casting machine in its Houston, Tex. plant. The Castomatic method is one by which liquid metal is maintained under pressure in a closed system from melting pot to mold, and then cast automatically. Each cycle in the operation is controlled to fractions of a second by electronic means. Castomatic type metals are now available in the following basic compositions: Monotype or Ludlow, Stereotype, Linotype or Intertype, and Mor-Tin replacement metal. Please refer to PEE No. 66 if additional information is desired.

Vinylite Technical Data

DATA on forms, properties and applications for Vinylite brand acetate resins are presented in an illustrated 24 page booklet by Bakelite Div., Union Carbide and Carbon Corp. Compiled as a technical reference source, the booklet embodies descriptions of Vinylite Vinyl acetate resins, including graphs, tables and necessary information required to formulate these products successfully. Also included is detailed information for the preparation of these resins for adhesives and other commercial uses, such as in paper coatings and metallic inks and lacquers. In each case the formulation and methods of use are explained. Subjects include preparation of solutions, emulsions, hot melts; use of plasticizers; cold- and hot-set methods of bonding. Copies of this booklet may be obtained by mentioning PEE No. 74 in your request.

Vacuum Cleaner — Type cases and paper bins are among the items in a printing plant which can be cleaned by the Syntron Air Pressure Vacuum Cleaner. According to the Syntron Company, the cleaner can be safely used under explosive conditions. It operates from a compressed air line with from 70 to 160 p.s.i. air pressure required and will consume at 100 p.s.i. approx. 4½ c.f.m. of air. The cleaner is made of aluminum and plastic stampings and designed with the dirt-collector bag inside the unit. Weight of cleaner with a 12 ft. length of air hose is 3 lbs. Cleaner specifications: overall length, 18 in.; diameter, 5 in.; 3/16 in. I.D. hose; ¼ in. pipe threads on hose fittings. Additional information may be obtained by mentioning PEE No. 71 in your request.

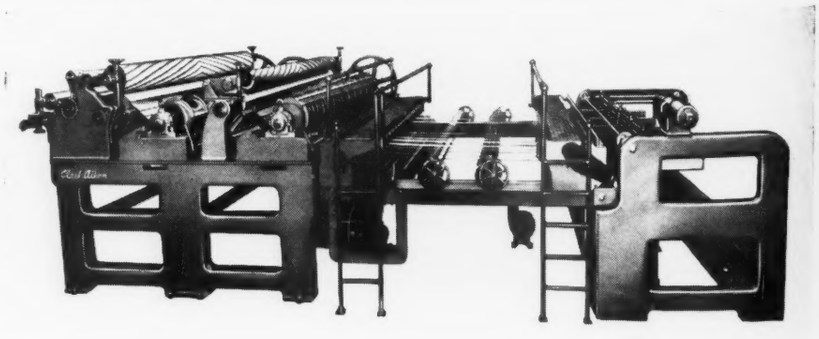
Cutter-Layboy Units

THREE basic types of cutter-layboy units, each available in a complete range of sizes for printers and paper converters, has been announced by Clark-Aiken Co. In each type, cutter, delivery and layboy are designed to function as a balanced unit, states sponsor, at paper travel speeds up to 800 f.p.m. All three types employ the self-sharpening Clark-Aiken Spiral Shear cylinder knife which afforts sheet length range within the knife cylinder capacity and final length adjustment while the cutter is in operation.

Other features of the machines include herringbone-type rubber covered pinch rolls, sand blasting of draw rolls to guard against slippage, and scale markings on the slitter shaft and jogger bar. Also 4 in. wide delivery tapes, a ratchet device for tension adjustment, and an automatic chain and sprocket lowering device whereby lowering speed is adjustable to accommodate any speed of pile height growth.

The Type H unit is designed for high speed, heavy duty service on board and multiple sheeting, drawing from up to 32 rolls of 8 lb. bond at one time. Type C units are intended for high speed single or multiple sheeting in finishing room service and are available in width capacities from 76 to 124 in.

The Type D unit is used for sheeting wax paper, foil, and side-run rolls and is available in sizes from 36 to 100 in. All units are designed to operate with either the overhanging or Vickery type layboy. The overhanging layboy will pile to a height of 48 in. and the pile may be removed from either side. With the Vickery-Type layboy, the pile remains stationary, the skids resting on the floor, while the delivery, actuated by hydraulic cylinders, rises as the pile height increases. The pile may be removed from the back or side. Additional information may be obtained by mentioning PEE No. 67 in your request.



The Type H Clark-Aiken Cutter-Layboy Unit for high speed, heavy duty service on board and multiple sheeting.

more presses . . . more papers . . .
more pages . . . more color

The KANSAS CITY STAR
EXPANDS FACILITIES

. . . adds more Goss Headliner Units

To keep pace with their growing market, The Kansas City Star has added 8 new Goss Headliner units and one pair of Uni-Flow folders to their present line (shown above) . . . bringing the total to 24 Headliners and five pairs of folders now in service.

The original 16 Headliner units . . . capable of turning out 208,000 thirty-two page papers each hour . . . enabled The Star to print four-color r.o.p. in its regular editions for the first time. The Headliners have also made it possible to produce larger papers in a single press run on Sunday editions and to get the daily editions off the presses faster.

Other Headliner advantages include Goss Tension Plate Lock-up for safety and quality printing and Goss Colortrol for finger tip adjustment of all ink feed controls.

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ANPA Mechanical and Research Reports

THE progress and activities of the ANPA mechanical committee, mechanical department, research committee, and the research director were related in reports submitted before the 65th annual convention of the American Newspaper Publishers Assoc. The publishers group met at the Waldorf-Astoria Hotel, New York, April 23-26. The reports are as follows:

Mechanical Committee Report

Publishers of the nation's newspapers were urged to send their production and mechanical executives to the 23rd ANPA Mechanical Conference in Chicago, June 11, 12 and 13, by Leslie J. Griner, Chairman of the ANPA Mechanical Committee, in his annual report. "The entire program is aimed at the elimination of waste in all forms and a more efficient and economical operation," declared Griner.

He indicated that the conference to be held at Chicago's Edgewater Beach Hotel will comprise the best meeting ever staged by the group. Suppliers and manufacturers of newspaper equipment have contracted for all available space to exhibit "new devices and machines and show improvements of existing equipment," he added.

The Committee praised the work of the Mechanical Department and urged ANPA members to avail themselves of the "vast storehouse of information" available from this source. Every regional mechanical conference held during 1950 was attended by the manager of the Mechanical Dept. or one or more members of the Mechanical Committee.

Other members of the committee are: John L. Blake, Leven T. Deputy, Edwin H. Evers, Harry Eybers, B. F. Garrity, W. E. Gibbons, Fred Gross, Shields Johnson, Stephen J. Lambert, F. Richard Lilly, Charles R. McGuire, Joseph E. McMullen, John W. Park, J. D. Raridan, W. Watson Southam, Reg Tranter, and Earl R. Weiskittel.

Mechanical Dept. Report

The importance of employee relations to newspaper production will again predominate this year's mechanical conference, according to Vernon R. Spitaleri, Manager of the ANPA Mechanical Department, in his report. Included among the subjects to be handled by some of the nation's best informed speakers are *Modern Industrial Relations as Applied to Newspapers, Personnel and Productivity, Newspaper Foreman Training*, and *Effective Personnel Practices for Newspapers.*

The program will also include discussions on the recent developments in the various newspaper production departments. Spitaleri emphasized that all major mechanical departments will be thoroughly covered at the conference.

A substantial portion of the Mechanical Department's activities is answering inquiries from member newspapers which Spitaleri described in numbers as "tremendous." He added that "the department broke the record set last year in the number of mechanical bulletins issued on pertinent and timely subjects of value to the membership."

Referring to the ANPA-AAAA Joint Committee on Newspaper Printing, he said this committee, ". . . has again marked another active and useful year in the interest of achieving improved reproduction of advertising in newspapers. The committee has already published three reports on art work preparation, proper methods for handling advertising materials, proper preparation of duplicate printing materials for newspapers and other similar material."

He related that the department has published considerable information on the proper handling and storage of newsprint and careful supervision to maintain newsprint waste at a minimum. He also mentioned that a type survey was completed by the department which includes full information as to body types, classified types and styles from 649 newspapers.

Research Committee Report

The annual report of the ANPA Mechanical Research Committee was distinctly optimistic in nature and in it are related some of the achievements of the ANPA Research Dept. The report was submitted by Chairman Wm. Baumrucker, jr., and committee members R. R. Cranmer, R. E. Lent, J. J. Shea and J. L. Stackhouse.

The Research Committee reported that the plastic stereotype molding blanket is being used in over 500 large and small daily newspaper plants. The blanket can be used either to improve printing quality or to increase mat shrinkage to permit reduction in the width of newsprint rolls.

The Committee asserts that newspapers saving money by printing on narrower pages report annual savings varying from $1.2 thousand to $300 thousand on each newspaper. ". . . the potential saving to the newspapers of the country," it is stated, "runs into millions of dollars per year."

Among developments in which the Research Department participated are: (1) Sheridan Automatic Stuffing Machine (2) The DeFlorez Unit Type Stuffing Machine; (3) The Comet 12-line-per-min. Teletypesetter-operated Linotype; (4) The Cutler-Hammer machine for counting and stacking bundles at the end of conveyors; (5) A new type of wire tying machine developed by Wiretyer Corporation.

Construction of the $110 thousand laboratory building in Easton, Pa., is well under way and is expected to be ready for occupancy in May. In addition to equipment purchased for the laboratories, approx. $100 thousand worth of printing and laboratory machinery has been given or loaned by newspapers or cooperating industries.

The NAPA Research Committee states that formal projects being undertaken are as follows: (1) Research on an automatic router has been completed and negotiations are under way for manufacture; (2) Work on the stereotype mat packing elimination project is being resumed; (3) Encouraging progress on Printability with the Institute of Paper Chemistry has been reported; (4) Progress is being made in the study of direct plate printing and includes offset, dry offset and direct plate letterpress printing; (5) Mechanical production aids, such as the engraver's glass and composing room slug gauge, will be announced commercially and other aids are in development in the laboratory at Easton, Pa.; (6) A new type of web tension device for newspaper presses to help permit the running of flat and defective rolls of paper has been constructed and is being installed on a newspaper press for testing; (7) Other experimental work includes that on the fluid molding technique; the work is being continued with optimistic prognosis for eventual success, it is stated by the Research Committee.

Research Director Reports

In his annual report to the American Newspaper Publishers Assoc., Research Director C. M. Flint comprehensively summarized the immediate past and present activities of the Research Dept. and outlined the pattern which will be followed by the department. Mr. Flint stated:

"In some respects I feel we have overlooked reporting on one of the principal objectives of the program and that we have failed to give the proper recognition to some of the prime supporters of our effort. We have reached a milestone in our research progress where we can point to accomplishment rather than only to plans for the future. It is a progress wherein the ANPA, helped in research by its member papers, shares the credit with our cooperative manufacturers and suppliers."

ANPA active research started late in 1948 and was planned for three types of simultaneous operation: (1) Cooperative research with manufacturers to the newspaper business; (2) Research under contract with existing research laboratories, and (3) Research in the ANPA Laboratory in Easton, Pa.

Mr. Flint related that "In the beginning the cooperative portion of our program was the only activity envisioned. The others have followed as a necessary complement. Cooperative research with manufacturers is still one of our most important functions."

He discussed the engagement of Arthur D. Little, Inc., of Cambridge, Mass., to make a survey of the entire newspaper production field, to outline those operations which, in their opinion, could be improved, and to make suggestions as to how those improvements could be achieved . . . We published the report in its entirety so that manufacturers would fully understand the type of thing we were trying to accomplish."

Mr. Flint continued: "I am pleased to report that the response by manufac-

(*Continued on Page 48*)

Patents

For The GRAPHIC ARTS

Covering patents issued March 6, March 13, March 20 and March 27.

Binding, Cutting, Perforation

During the four weeks covered by this report, no patents have issued for this heading.

Composing Room Equipment

2,545,580. MITER GAUGE. The angle of oblique sided printer's copy preparatory to making a printing chase for oblique sided printing forms according to method disclosed in patent 2,492,289, issued on December 27, 1949, is determined by this gauge. The gauge has a long rectangular body and a thickened square rear end with a bottom adapted to be imposed on printer's copy with one side engaging its straight edge. A flat segmental gauge with a straight gauging edge pivots on long body forwardly of thickened end to engage gauging edge with edge of copy. The pivot is adapted to clamp the segment to the gauge body in different set positions. Invented by Leo Hoppe, Chicago, Ill. Unassigned. Original application November 6, 1948, divided, and this application September 21, 1949. 1 claim.

Feeding, Folding, Delivery

2,543,836. SHEET FEEDING MECHANISM is composed of units. Each unit contains a quantity of a page and all the pages in the same unit bear indicia. There are as many units as there are differently numbered sheets to be collated. That is, all the sheets bearing the number of page 1 are in one unit and each higher numbered page is in the unit next higher. Each unit is identical and the units are placed one above the other in step ladder fashion. They are connected to a common chute that guides each sheet as it is ejected into a common basket or container. A small electric motor operates the machine. Invented by Benjamin Dunn, West Hartford, Conn. Unassigned. Application January 9, 1947. 4 claims.

2,546,075. BLADE AND JAW CONSTRUCTION FOR CYLINDER FOLDING MECHANISMS. Improvements are provided in rotary folding mechanisms in which a tucking blade is provided on the periphery of a collector cylinder to tuck a sheet of paper between a pair of clamping jaws which are mounted on the periphery of another cylinder. The clamping jaws are arranged to grip and fold a sheet of paper inserted therebetween by the tucking blade. The blade of the invention has a V-shaped tucking edge for insertion between the clamping jaws. Resilient inserts, preferably formed of rubber, are mounted upon the clamping jaw to grip and fold sheets of paper inserted between the jaws. A hollow clamping jaw cylinder is loosely filled with loose particles of cork to reduce noise. Invented by Arthur Meadowcroft, Chicago, Ill. Assigned to Chicago Rotoprint Co., Chicago, Ill. Application October 9, 1947. 6 claims.

2,546,221. PAPER FEEDING, CUTTING, AND REGISTERING MECHANISM. Paper sheets are cut and fed in registered relation to a printing press by a combination of rotary cutters having axially spaced angularly stepped coacting work of gripping segments. The segments of one cutter are resilient, and knives are mounted in the segments in angularly inclined relation to the axes of the cutters. A sheet feeder is arranged at the rear of the cutter. The feeder comprises a roller having a driving means, a coacting press roller shiftable to and from operating relation to the feed roller, and means for shifting the press roller in timed relation to the cutters whereby the sheet feed is non-operative during cutting periods. Invented by Nelson E. Funk, Kalamazoo, Mich. Unassigned. Application January 12, 1946. 11 claims.

(*Continued on Page 38*)

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

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CHALLENGE MACHINERY COMPANY (Composing Room Equipment.)

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Miscellaneous

2,544,455. PRINT ROLLS of lighter weight and less expensive construction may be made by forcing into a tubular metal shell a laminated core of aluminum or cardboard of greater diameter than the inner diameter of the shell to cause the laminations to be cupped. After the core is fully within the shell, the mass of cupped laminations are subjected to pressure applied longitudinally of the shell over the entire transverse cross-section of the mass for moving individual laminations longitudinally of the shell which compacts the mass and flattens the laminations into intimate contact with the inner surface of the shell to bind the shell to the core. Invented by Joseph M. Goulding, Fairhaven, Mass. Assigned to Revere Copper & Brass, Inc., New York, N. Y. Original application October 31, 1945, divided, this application August 21, 1947. 7 claims.

Plate Making

2,543,895. COATING DEVICE FOR ENGRAVED CYLINDERS. Invention relates to a machine for coating the raised surfaces and the side walls of these surfaces on an engraved printing plate before the plate is re-etched. Means are provided for pivotally supporting the engraved cylinder. The mechanism includes a transfer roller for cooperating with the cylinder, a pivotal supporting means upon which the roller is held, a slide upon which the supporting means is held, means for moving the slide to bring the rollers in and out of contact with the cylinder, a pivoted plate upon which the slide is supported, and a base upon which the plate is pivoted. Invented by Lawrence B. Corbett, Binghamton, N. Y. Assigned to International Business Machines Corp., New York, N. Y. Application December 28, 1946. 7 claims.

2,544,169. METHOD OF BONDING METAL PRINTING PLATES TO WOODEN SUPPORTS. A metal printing plate is attached to its wooden supporting block by forming an adherent dry film of a thermoplastic cement on the wooden block, heating the metal plate and pressing it against the dry film of cement to fuse the cement solely by the heat contained in the plate at contact. Pressure is maintained until hardening of the cement. The cement consists of a large part of an oil-resistant synthetic rubber, a smaller part of a thermosetting phenolic resin and a mineral filler. Invention is described with reference to making photoengraving plates. Invented by Joseph E. Manning, Newton, and Malcolm Seymour, Boston, Mass. Assigned to B. B. Chemical Co., Boston, Mass. Application October 10, 1945. 1 claim.

2,544,905. METHOD OF MAKING PHOTOGRAPHIC RELIEF IMAGES. A metal plate is coated with a layer of a mixture of cellulose ethyl ether and difurfural cyclopentanone. A relief image is formed in the layer by exposure to an image and only the unexposed area of the layer is washed away with a solvent for said area. The solvent comprises a ferric chloride solution. Invented by Werter P. Van Deusen, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application October 23, 1948. 8 claims.

2,545,291. STEREOTYPES MAY BE PLATED by the process of this invention which is suitable for chromium plating large cylindrical objects. The plating tank contains an electrolyte and the cylinder to be plated. A vertically disposed bay extends outwardly of and opens into the tank at one side. There is an anode in the bay and its position in the bay is adjustable. A well in the bottom of the tank contains a plate which is rotatably mounted and a bearing mounted on the plate eccentrically rotates with reference to the plate and receives one end of a cylinder to be plated. A door between the bay and the tank rotates on a vertical axis to vary the width of the entrance into the bay during a plating operation and thus controls the current density under varying conditions of temperature in the electrolyte. The plate in the well may be rotated to adjust the distance between the anode and the cylinder to be plated and the bearing may be rotated relative to the plate for rotating the cylinder while it is undergoing plating. Invented by William Messinger, Philadelphia, Pa., and Donald B. Lytle, Bronxville, N. Y. Said Lytle assigned his interest to Time, Inc., New York, N. Y. Application March 31, 1948. 1 claim.

Printing Inks

During the four weeks covered by this report, no patents have issued for this heading.

Printing Presses and Equipment

2,544,279. THE WASHABLE TYMPAN for printing presses is a laminated sheet

DO THE WORK OF HOURS *in Minutes!*

SLASH YOUR PRINTING COSTS WITH THE

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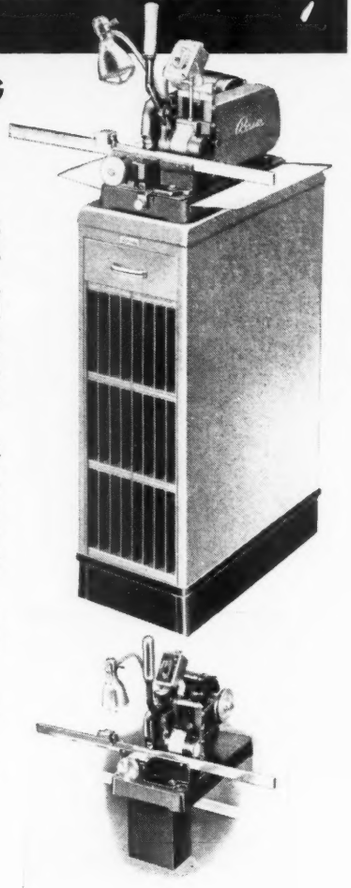

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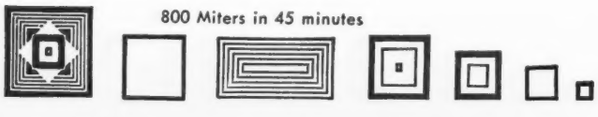

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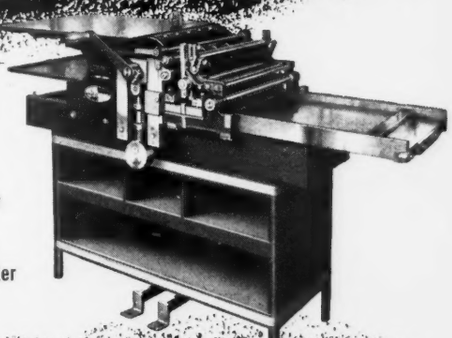

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Style K
with ink plate . . .
or 20" Power Ink
Distributor (extra)

660

The name "Challenge" is the trade mark of *Cylinder Press Design* in all three styles of Series K Proof Presses. Each has a revolving cylinder with reciprocating bed on anti-friction rollers to produce clean, sharp proofs. Sheets are fed to cylinder grippers and micrometer side guide. A foot trip prevents offset on the packing during the return stroke. Grippers may be opened at any position of the cylinder. Two sizes handle anything from an ordinary galley proof up to 14½ x 23" or 19½ x 23½". All models equipped with sliding feed board, delivery board and zinc galley plate. Get details today!

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made up of a sheet of paper possessing high tensile strength and a sheet of parchment paper forming the exposed surface of the tympan. The adhesive between the two sheets consists of a starch paste of a predetermined viscosity and an aqueous emulsion of cellulose acetate resin. Invented by William Page, Appleton, Wis. Assigned to Swigart Paper Co., Chicago, Ill. Application July 28, 1948. 6 claims

2,545,836. INK AND WATER MOTION TRIP FOR OFFSET PRINTING MACHINES. The invention provides means for driving the ink motion of a printing press independently of the press, as for cleaning. A clutch is provided whereby the ink motion may be selectively coupled to the press drive or to an independent drive. Operation of tripping means for the ink motion stops the press upon operation of the clutch to couple the ink motion to the independent drive. Invented by Alexander J. Albrecht, West New York, N. Y. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application August 12, 1946. 9 claims.

2,546,197. LOCK DEVICE FOR PRINTERS' CHASES may be operated by a single tool. It includes a bar adjustable within the chase to engage a form and a rack and pinion operable to adjust the bar to selected position within the chase. The pinion has a split hub in which a cone is axially movable to expand the hub and prevent pinion from rotating. A threaded tool is carried by the pinion to engage with the cone and cause axial movement of cone upon operation of the tool. The arrangement is such that rotation of cone with respect to hub is prevented. Invented by George F. Morrison and Herman C. Frentzel, Milwaukee, Wis. Assigned to The Morrison Co., Milwaukee, Wis. Application June 11, 1948. 1 claim.

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Check this complete line of press packing which offers the proper gauges or combination of gauges for every press condition.
COMBINO—An extremely durable clean printing laminated blanket. Gauges .062", .083", .093".
"TINGUE" COATED FELT—For those who prefer a softer packing than COMBINO. Gauges .083", .093".
UNCOATED WOOL FELT — Gauges .063", .072", .083".
TOP Drawsheet is firm, durable, economical and of long life. Gauges .016", .025", .030".
GOLD TYMPAN Drawsheet—An old favorite for flat bed presses. Gauge .012".
IMPROVED SATISFACTION — A fabric impregnated with "Neoprene" and coated with "Calvaprene." Gauges .024", .026".
STERLING — The latest plastic drawsheet. Gauge .025".
CUSHION CORK*—A highly resilient underpacking. Gauges .059" to .085".
TINGUCORK*—Much firmer than "CUSHION CORK" and preferred where precision plates are available. Gauges .032", .055" to .086".
KORKER* — Under blanket for older type presses or where an unfavorable mechanical condition exists. Gauges .058" to .070".
FOUNDATION — A firm, durable oilproof under packing laminated by duPont with "Neoprene". Gauges .032", .040", .053" to .085", .120"".
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CANADIAN SALES AGENTS ROSS WHITEHEAD & CO. LTD., MONTREAL CAN.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D.C.

2,546,301. THE PRINTING CYLINDER obviates the need for the heavy pressures usually used in orthodox printing presses. The cylinder is in the form of a rigid perforated supporting tube of full cylindrical form, cylinder heads being attached to opposite ends of the tube. A rigid pervious body surrounds the tube, the body being formed of thin flat open-mesh metal fabric ribbon wound helically on the tube and so as to present a surface free of ridges. The arrangement is such that free and uniform passage or expulsion of liquids through the pores or interstices of the cylinder to the printing surface is assured, either for dampening the non-printing areas when the printing surface is of the relief or planographic type, or for inking the image-printing areas when the printing surface is of the intaglio or gravure type. Invented by William C. Huebner, New York, N. Y. Unassigned. Application March 14, 1946. 2 claims.

2,546,372. WEB TENSIONING MECHANISM is provided for use with a rotary offset press for printing impressions at spaced intervals on a continuous moving web. The invention extends the range of the press to include the printing of bags of lengths which are shorter than, equal to, or longer than the circumference of the plate cylinders. The tensioning mechanism includes two tension rolls journalled in an oscillating tension frame. A spring device is provided for biasing tension frame to one of two initial positions. Invented by Carl W. Pinckert, St. Louis, Mo. Assigned to Bemis Bro. Bag Co., St. Louis, Mo. Application July 22, 1946. 11 claims.

2,546,793. MOISTURE REMOVING MEANS FOR THE INKER OF LITHOGRAPHIC PRESSES AND THE LIKE. The invention has reference to improvements in the lithographic press of patent 2,395,151 of February 19, 1946, in which emulsification of water with ink is prevented by directing an air blast on one or more of the form rollers, particularly the form roller first encountered by the freshly moistened surface of the form cylinder. The improvement provides for controlling the air blast automatically in accordance with the operation of the press in order to avoid waste of air when the press is not in operation. Invented by Joseph E. Sodomka, Racine, Wis. Unassigned. Application February 16, 1946. 13 claims.

Alert Management

(Continued from Page 30)

Letterpress Press Area—This department is supervised by Foreman W. E. Fulton. The contrast between the aisle areas in the letterpress press area and that of the offset press areas indicates that the letterpress equipment may not be expanded to the same extent as in the offset department. However, it should be considered that through their intimate association with the company's work volume, management executives can install or replace different models of presses in the letterpress department to increase the press capacity in the future and still have enough floor space to accomplish that objective.

Bindery—Bindery Foreman Loyal M. Dugger feels that in no other department of the plant need so much attention be given to aisle widths as in the bindery. When work is in process, many skids or rolling trucks may be required in different sections according to the size of the job. Main aisle widths with printed work reposing on skids or trucks in this plant average 7 ft. width. This width permits transporting folded and/or finished work through aisles in which skids of work have been grouped around certain other operations. There is ample temporary average storage area around the folding machines. Two of the main aisles leading to the packing and storage area are approx. 8 ft. wide.

The work flows through the bindery without bottlenecking. The collating tables are in close proximity to the folders. This work then flows toward the Brackett Trimmer and then into the Packing and Shipping Area—7.

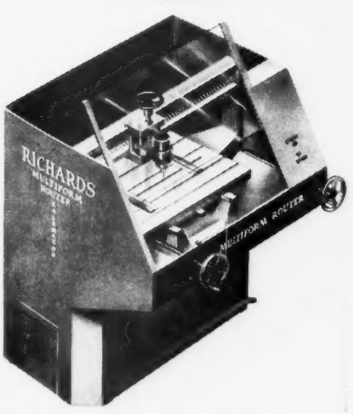
With the paper cutters, the cutting tables have been provided. Two low scrap paper bins mounted on casters rest underneath each table.

One little item of importance is that the Anderson Banding Machine has been mounted on a rolling table. An automatic gum tape machine and a shelf have been provided to carry kraft striprolls. The table is rolled next to the folder. As the work is banded the packages are placed in a signature truck to eliminate double handling.

Paper Stock Area—A considerable inventory of paper stock is carried. This department is under the supervision of Marvin Kappleman, who is also the paper buyer. The stock in this department is organized along the aisles according to the kind of stock. Labels are vastened to the storage racks to indicate the type of paper in the rack. In this way, together with a running stock inventory, all people concerned with paper requisitions are in a position to issue paper quickly to the press departments or to the bindery when needed.

Incidental to operation of the paper stock room, are two important pieces of equipment. One of these is a Yale & Towne hydraulic truck and the other is a Clark gasoline operated fork lift truck. In addition, there is a heavy-duty warehouse hand truck which rolls along on rubber tired wheels. With this equipment, paper shipments can be handled

RICHARDS ROUTERS—
Produce Extra Profits

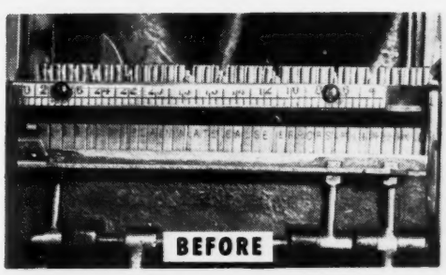


A WONDER WORKER
OUR NEW *"STRATOLINE"*
FULLY ENCLOSED ROUTER

J. A. RICHARDS CO.
Kalamazoo, Michigan

USE *Dry Tape* TO CONTRAST MATS

Save errors, time, money in your shop with this new, safe process. A strip of Linotape placed on the reference faces of a clampful of mats stains the faces black after heating on Dri-Stain Platen. Apply Dri-Stain Inlay, for maximum contrast, and mats are ready to go back in the machine. Do it yourself—or have it done by your dealer's service man. Either way, the Dri-Stain Process is quick!



Notice "easy reading" of contrasted mats.

Errors are quickly seen and can be corrected promptly in the assembler, when your mats are contrasted with Dri-Stain Process. Plants of all sizes report increased production and higher profits because of easy error detection.

Low cost: Actual cost of contrasting mats with Dri-Stain is only a few cents a day. Compare that with the cost of correcting errors at 20c to 75c each!

Shown at PNMC Exhibit.

Send coupon for free folder. Or, contact your nearest West Coast dealer:

Leach Printers' Supply Co., Inc.
421 Wall Street
Los Angeles 13, California

Don Stewart Company
441 Clay Street
San Francisco, California

PEE WP PP

Linotape Products Co.
1840 Larimer Street
Denver, Colorado

Gentlemen:

Please rush your informative folder, "How to Contrast Mats with Dry Tape."

*Name*_____

*Address*_____

LINOTAPE PRODUCTS CO. 1840 Larimer St., Denver, Colo.

Safety Plug
FOR YOUR
CUSHMAN
(LINOTYPE or INTERTYPE)
OFFSET MOTOR

- Cuts off power so no one can operate machine while you're working around in back of it.
- Single turn disconnects power. Male plug carries live leads; female is housed in motor.
- Supplied as optional equipment at small extra charge on the new Cushman Offset Motor.
- Can be used also on other type motors.

CUSHMAN ELECTRIC CO., INC.
ASSOCIATED WITH
PRECISION TRADE ★ MARK
LINOTYPE **PARTS** COMPANY
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Branch Offices: 1337 BROADWAY, KANSAS CITY 6, MO.
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BEVERIDGE *Says:*

"We're holding the line on the high quality of BEVERIDGE MATS.."

Because we are "holding the line" on high quality and uniformity during these trying times, BEVERIDGE MATS continue to be the finest mats for holding every fine detail and making clean cut impressions. That's why more and more stereotype superintendents are switching to BEVERIDGE MATS. For faithful reproductions and better printing, you can't beat them. Try a shipment.

New Products Division
The Beveridge Paper Company
Indianapolis 4, Indiana

and stacked quickly Each department is supplied with its own Yale & Towne hydraulic truck.

Tied in with the main stock area is a 50 in. Seybold cutter (at 1, Area *G*). This is considered an ideal location for the cutter in relation to stock in storage and the pressrooms. Stock handling is direct.

Executive Ⅽs

(Continued from Page 25)

Announcement has been made of the addition of Harry L. Wilson to the sales staff of Linotype Parts Co., Inc. Wilson will replace Charles L. Lawrence in the Midwest territory.

Walter H. Lynch, jr., has joined Gaetjens, Berger & Wirth, Inc., in a sales capacity. Lynch formerly was associated with the sales department of Fuchs & Lang Mfg. Co., Div. Sun Chemical Corp.

David W. Schulkind, President of E. P. Lawson Co., sailed recently for Europe and a tour of printing and lithographic plants in England, France, Germany and Switzerland. The scheduled six week trip will include attendance at the British Industries Fair and the Graphic Arts Exposition at Duesseldorf in the western zone of Germany.

O. P. Proudfoot, appointed Cleveland District Sales Office Mgr. for Cutler-Hammer, Inc., according to P. S. Jones, Vice President in Charge of Sales. Proudfoot succeeds R. J. Eckstein who passed away February 14. A graduate of Penn State College, Proudfoot joined Cutler-Hammer in 1928. Prior to his present appointment, he was a member of the company's Buffalo district sales staff.

Ralph C. Persons, Vice President and a director of Sun Chemical Corp., was elected First Vice President at a recent meeting of the Board of Directors. Persons has been associated with Sun Chemical since 1944.

The appointment of Leo Geiser as Director of Production of Champion Paper & Fibre Co., was announced recently by Reuben B. Robertson, jr., President of the company. In his new capacity, Geiser becomes a member of the company's administrative group, with staff supervision over all pulp, paper, board, and finishing operations, as well as scheduling and inspection functions, in the Champion mills located at Hamilton, O., Canton, N. C., and Houston, Tex. He has been associated with Champion for 29 years.

At a recent meeting of the Board of Directors of American Smelting and Refining Co., Stuart H. Levison was elected Vice President in Charge of Zinc and Coal Operations. A graduate of Columbia University, Levison has been general manager of the company's zinc and coal operations since 1930.

Robert C. Byler, Advertising Manager of SKF Industries, Inc., Philadelphia, passed away suddenly on March 27.

W. E. Murphy, St. Louis Sales Representative for Ideal Roller & Mfg. Co., has been recalled in the U. S. Army Signal Corps. Murphy's territory, which includes St. Louis and Kansas City, will be handled in his absence by John T. Goode of Chicago. According to E. B. Davis, Vice President of the company,

MORTON L. PEREIRA AND ASSOCIATES

ARCHITECTS AND ENGINEERS

IN THE DESIGN OF PRINTING AND PUBLISHING PLANTS

35 Years of Experience Designing New Plants

MODERNIZING...PREPARING SURVEYS...CONSULTATIONS

If you contemplate building a new plant, modernizing present facilities or are merely interested in discussing plant layout, Morton L. Pereira & Associates will be glad to give you the benefit of a specialized knowledge that has solved many problems in the printing and publishing industry.

Your inquiry is respectfully solicited.
Our brochure available upon request.

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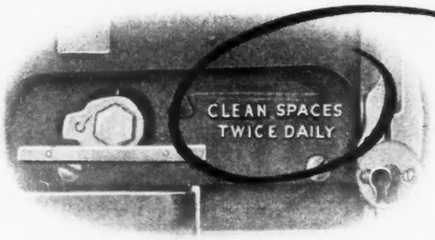

What does it Mean?

You find these instructions on every Linotype Machine. They're put there to remind you of a chore that will result in protection of matrices and cleaner composition.

But — cleaning spacebands is a dirty and time-taking job that nobody welcomes. Now, with the Hartco Spaceband Machine, you automatically remove metal from the sleeve and completely lubricate the spaceband, top and bottom and between the wedge and the sleeve — at the rate of a set per minute.

Why not look into the Hartco Spaceband Machine NOW? Write for descriptive folder.

PRECISION
TRADE ★ MARK

LINOTYPE PARTS COMPANY
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SOUTH HACKENSACK, N. J.
Branch Office: 1327 BROADWAY, KANSAS CITY 6, MO.
CHICAGO • MINNEAPOLIS • DENVER • NEW YORK • BOSTON

*ACE BELTS last longer because they don't stretch.

Murphy will be returned to his territory upon release from his duties in the service.

Norman H. Peterson has been appointed Asst. Advertising Mgr. of Timken Roller Bearing Co., according to announcement by S. T. Salvage, Advertising Mgr. Peterson, a graduate of the University of Illinois, served as a copywriter with Timken's advertising department since 1946. He is a veteran of World War II.

Paul Baxter, Div. Vice Pres., International Printing Ink, has announced two appointments of IPI Branch Managers on the Pacific Coast. Gordon Smith, formerly Seattle branch manager, has been named Manager of the San Francisco branch. Walter Prall becomes Seattle Branch Manager. Smith has been associated with IPI since 1938, while Prall started with the firm in 1939.

John S. Conger was elected Asst. Secretary and Asst. Treasurer of Mergenthaler Linotype Co. at a recent meeting of the Board of Directors. Prior to his election to this post, he served as administrative assistant to the president, a position he has held since joining Mergenthaler in 1949. Conger is a graduate of the University of Pennsylvania.

Hold the fine serifs of a bright new font of foundry or monotype. Burgess stereo mats do just that . . . and deliver a plate casting that will reproduce faithfully every dot or line in the original pattern. Laboratory control through every step in the manufacture of Burgess stereo mats, is your assurance of uniform high quality stereotyping every time.

Why not put Burgess mats to work in your shop today?

BURGESS CELLULOSE COMPANY
Manufacturers and Distributors of
Burgess Chrome and Tone-Tex Mats
FREEPORT, ILLINOIS

A Laboratory Product
BURGESS
Chrome
MATS

BOOKS

Sources of Information in the Graphic Arts

PRINTING craftsmen, students, teachers and consumers should find numerous occasions to use a comprehensive bibliography on the Graphic Arts compiled by George J. Mills, Assistant Professor of Printing Management at Carnegie Institute of Technology. Entitled *Sources of Information in the American Graphic Arts*, the book was prepared to serve as a guide to reference sources of changes which have taken place in the Graphic Arts field since 1945.

Reference books available on various subjects pertaining to the Graphic Arts are listed alphabetically in a section of the book. These have been grouped under general classifications such as bookbinding, color, composition, lithography, newspaper production, paper, photoengraving, and processes. Information listed for each book includes: author, title, place of publication, publisher, date of publication, number of pages, and price.

In addition, the book includes a listing of periodicals and directories available for information of Graphic Arts interest. A sources section of the book includes libraries, schools, trade associations, labor organizations, research programs, and miscellaneous sources in its listings of informational sources.

Sources of Information in the American Graphic Arts—by George J. Mills. Book consists of 70 pages; size, 6 in. by 9 in.; paper cover with brown plastic comb binding. May be ordered from Carnegie Press, Carnegie Institute of Technology, Pittsburgh 13, Pa. Price, $2 per copy.

How To Run A Lathe

SOUTH Bend Lathe Works has released the 50th edition of the book *How To Run A Lathe*, consisting of fundamental operations of modern lathe practice written in non-technical language for the apprentice or student to understand. More than 350 illustrations accompany the text in explaining such subjects as the correct installation and leveling of the lathe, grinding cutter bits, turning, boring, thread cutting, taper turning, drilling, reaming, and tapping.

Machinability ratings and cutting speeds for various kinds of steels; and standard tolerances for press fits, running fits, push fits, and sliding fits are also included. The book deals with allowances for finish turning, filing, polishing, grinding, reaming, lapping and honing.

Operation of the lathe, lathe tools and their application, how to take accurate measurements, chuck work, and special

26 YEARS OF SERVICE!

...and G-E heaters for melting stereotype metal are still on the job!

AT THE WATERBURY REPUBLICAN & AMERICAN, two 5-kw G-E Calrod* cast-in immersion heaters which were installed in 1925 are still in daily operation! It takes real quality to deliver that kind of heater life . . . the kind of quality that is built into *every* G-E heater. And you don't have to have a million-plus circulation to enjoy the advantages of melting metal electrically.

IDEAL FOR SMALL PLANT

"The electrically-heated stereotype pot is ideal for the small newspaper plant," says Press and Stereotype Superintendent B. H. Dupuy. And you'll agree the day you convert your present equipment. G-E immersion heaters put the heat right into the metal for maximum heat transfer and minimum heat losses. That means rapid heating, comfortable working conditions and economical operation.

CONVERT OVER A WEEKEND

Your furnaces can probably be converted over a week end with no interruption in production. For more information, contact the G-E Sales Office nearest you or write to *General Electric Co., Schenectady 5, N. Y.*

*Registered U.S. Patent Office

720-45

GENERAL ELECTRIC

Get good metal in the middle... Blatchford

Make sure your printing *gives* good impressions by making sure it *gets* them . . . from the metal that puts the ink on the paper.

Blatchford Metal is made to produce good impressions . . . on the finest of "coateds" or the coarsest of "news." It melts smoothly, flows freely, "gets" every bit of detail in the mat or matrix. Type, slugs and plates of Blatchford are true to the mold.

There's a Blatchford Metal available for every composing and casting machine, and for electrotype backing. Every pound of Blatchford is clean, correctly proportioned, uniformly alloyed . . . qualities you'd expect in a product of the leader in lead and lead alloys.

Remember, metal is the "middleman" in your letterpress printing process. Be sure of its fine performance. Buy Blatchford.

Cut dross losses, get cleaner re-melts
Use Blatchford Type Metal Flux

NATIONAL LEAD COMPANY – Atlanta, Baltimore, Chicago, Cincinnati, Cleveland, Dallas, Philadelphia, Pittsburgh, St. Louis; New York: E. W. Blatchford Co.; New England: National Lead Co. of Mass., Boston; Pacific Coast: Morris P. Kirk & Son, Inc., Los Angeles.

Blatchford
is the NATIONAL name for dependable metal . . . and the original name for "Honeycomb" base.

classes of work are among the 11 chapter headings. Rules and formulas are listed for calculating the dimensions of involute spur gears and calculating the speed and size of pulleys.

How To Run A Lathe—Book consists of 128 pages; size 5¼ in. by 8 in.; Price with paper cover, 25c per copy postpaid; imitation leather fabrikoid cover, $1 per copy postpaid. May be ordered from South Bend Lathe Works, South Bend 22, Ind.

If your address on the wrapper in which *Printing Equipment Engineer* is sent you is incorrect, please tell us about it on a postcard.

NPA Orders

(**Continued from Page 17**)

zinc printing and offset plates are included in the order as operating supplies. Zinc plates may be obtained by a printer or lithographer with purchase orders rated "DO-97" and used exclusive of the restrictions imposed by the M-15 zinc order. Paper and paper products, paperboard and paperboard products, photographic film, and packaging materials and containers are among a list of items which may not be obtained with a DO-97 rating.

According to Regulation 4, "materials incorporated in a product ordinarily may not be treated by the producer as operating supplies," but can be declared operating supplies "where they are normally chargeable as an operating expense according to established accounting practice." In other words, this rating cannot be applied by printers to their purchases of ink unless used by customers in orders placed for printing. It can then be passed on to suppliers of such products for the needed material.

Orders for MRO or minor capital additions must be marked with the symbol DO-97, together with the words, "Certified under NPA Reg. 4." This certification must then be signed by the person placing the order or by a person authorized to sign for that purpose.

Establishing MRO Quotas. — Persons making use of the DO-97 rating must establish quarterly MRO quotas. Either standard quarterly or seasonal quotas may be used. *A standard quarterly quota constitutes one-fourth the amount* a person (company) spent for MRO in the calendar year 1950 (or, if he operated on a fiscal year basis, in his fiscal year ending nearest to December 31, 1950).

If a person uses a seasonal quota, he must take as his quarterly MRO quotas the amounts he spent for MRO in the corresponding quarters of 1950 (or, if he operated on a fiscal year basis, in the corresponding quarters of his fiscal year ending nearest to December 31, 1950.) An election to use either the standard or seasonal quota may not afterward be changed without written authorization of the NPA.

Any person who establishes a quarterly MRO quota in excess of $1 thousand must, within 30 days after his first use of a DO-97 rating, notify the NPA in writing of the quota he has established, the case period he has used, the method by which he has figured the quota, and any corrections he has made for seasonal or other factors.

According to a recent amendment to Regulation 4, all DO-97 ratings are cancelled which were assigned prior to April 16, 1951, toward the purchase of paper and paper products, paperboard and paperboard products, photographic film, and packaging materials and containers.

To take care of situations where the order might work hardship upon a company, provision is made for relief, as for instance, if a firm has installed an expensive piece of equipment since establishment of its MRO quota. It is desirable to purchase repair parts for the equipment for emergency use, but the purchase of such parts will cause the company to exceed its established MRO quota. In such cases, it is our understanding appeal for permission to purchase the parts may be made to NPA.

Among the 10,000 production executive readers of *Printing Equipment Engineer* you will find ready buyers for your surplus equipment. Tell them what you have available in *Printing Equipment Engineer* Classified Ads. Rates on page 55.

TO "High Grade" Slab Zinc (99.97 + % pure) add fractional amounts of other metals for hardness, temper, and "workability". Melt, blend, and heat by the Electric Induction Process to exact consistency . . . with controlled temperature. Cast, roll, and finish with a wealth of experience and skill plus modern precision equipment. Add laboratory control and field testing for assured perfection.

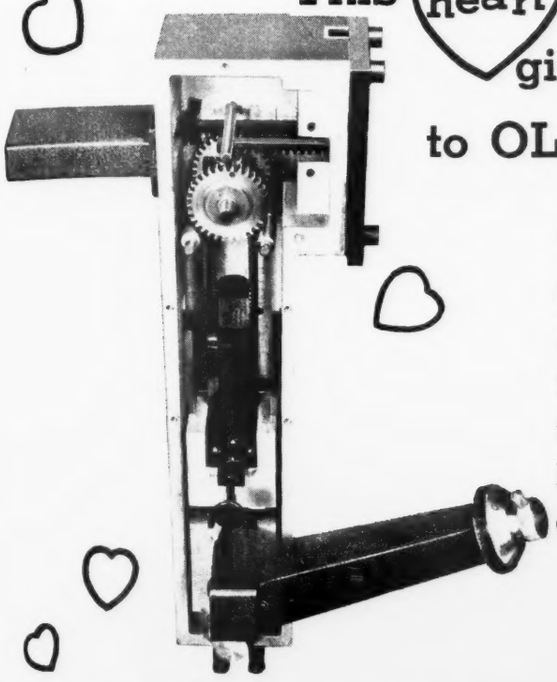
Result: the best engravers' zinc obtainable today — ZOMO Zinc and A-Z Alloy — for *better* engravings.

Specify ZOMO and A-Z ALLOY when ordering metal from your supplier.

ATLANTIC ZINC WORKS, INC. • Brooklyn 31, N. Y.

ZOMO ELECTRIC ZINC ◆ A-Z ELECTRIC ALLOY

This heart of the "STAR" QUADDER gives NEW PRODUCTIVITY to OLD Linotypes and Intertypes



The sturdy train of racks and gears
that give controlled movement to the vise jaws
is the heart of the STAR Quadder;
it is this sturdy heart which gives new life
to old machines. STAR Quadders
have been installed successfully
on machines of all ages.

The new Model "E", now ready for delivery, is made to synchronize with the Mohr Saw. Write for brochure telling of the new improvements, and how this investment earns money.

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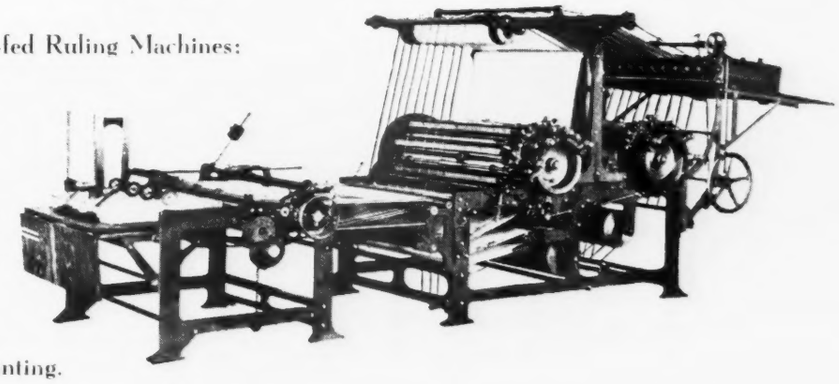
This ad set in Studio, Egmont Family

Amsterdam Continental says . . .
for every ruling job there's a **way**
where there's a Will

Will Sheet-fed Ruling Machines:
small-space, versatile,
in single sider
or double sider models.
Faint lining and strike ruling.
Clear, clean impressions,
long absorbent cloth runs
over ruling cylinder.
Can also do slitting, perforating,
grooving and design printing.
Will ruling machines feature
unified, easy, operation,
accessibility, speed, absolute precision.



Write for full data,
or come in,
see for yourself!

Amsterdam Continental
Types and Graphic Equipment Inc.

268-276 Fourth Avenue, New York 10, N. Y.

ANPA Reports

(Continued from Page 36)

turers has been immediate and fully cooperative." The cooperative developments were then discussed by the speaker and are listed in that section of this article in which Chairman Baumrucker reports for the Research Committee.

The speaker again gave credit to the cooperating manufacturer and supplier companies by saying: "The cooperation of manufacturers and suppliers to the newspaper business has been outstanding. Several of the projects will cost more individually than the entire annual cost of the ANPA research program. The combined total would show that the expenditures for research and development by the manufacturers and suppliers to our business exceed research appropriations by ANPA by better than $20 for each $1 of our research program . . . Through cooperative research alone the ANPA program is more than paying its way . . . The manufacturers and suppliers to our business are still the backbone of our cooperative research, and they have made other contributions to our program of a significant nature."

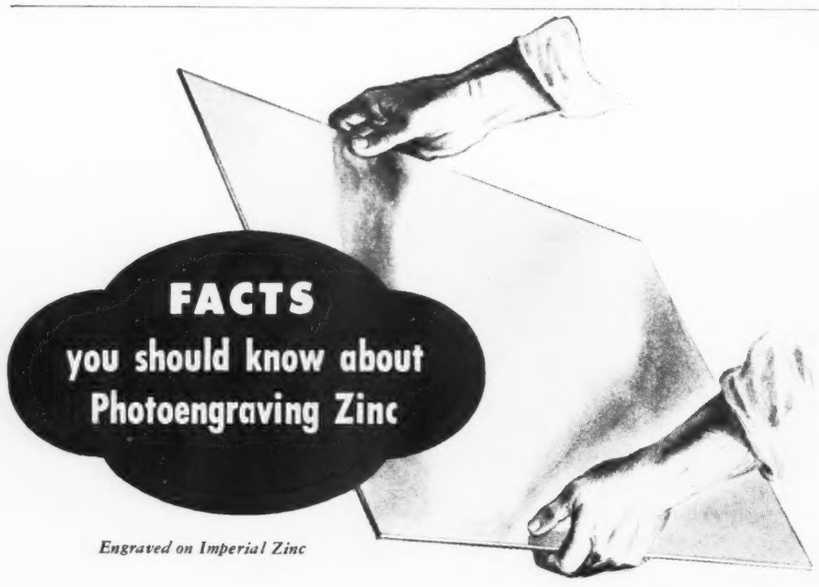
Referring to the second phase of simultaneous operation as outlined above, Mr. Flint said: "The work which is being done for us under contract with other research organizations is much more fundamental in nature and will not begin to bear fruit until we can take the results of their work and apply them directly, or through manufacturers, to a new product. These programs are farmed out because they are highly technical programs which we feel can be better conducted by specialized personnel. Progress on these programs is abstracted in our bulletin as reports are received."

Referring to the third phase of the ANPA research Program, Flint said: ". . . most of the problems which we tackle at the laboratory are also more fundamental in nature. Fundamental work is slow and it is costly. We have two thoughts concerning the laboratory. The first is that as a research organization we should supply the fundamental information required for technological improvement to manufacturers and suppliers so that those who wish to do so can make good use of it. The second thought is that we should provide newspaper Mechanical Departments with as many small improvements of a gadget nature as possible. In the first category, namely that of providing fundamental information, we have been making a thorough study of stereotype problems and engraving problems. We have issued reports which have been of interest to manufacturers and suppliers as well as to newspaper production men. In particular, our report on the pressures encountered during the rolling of mats in the stereotype operation contains the first comprehensive information ever to be published on this subject."

Continuing, the speaker said; "It is in the field of providing newspaper mechanical departments with small improvements that the laboratory has made its greatest direct contributions." Among these are the slug gauge and the engraver's glass which are now procurable from manufacturers.

Flint also discussed the plastic stereotype molding blanket contributed by the ANPA Research Dept. He said: "The most significant contribution has been our work on the introduction of what is probably the most controversial device submitted to newspapers in the last decade . . . As with all new techniques introduced into the newspaper business, the introduction of the plastic blanket is guaranteed not to work initially . . . Those stereotypers who have been genuinely interested in improving their product and reducing their costs have been or will be universally satisfied with the results which are obtainable." (Reported savings are mentioned in the report of the Research Committee in this article.)

Closing sentence in Flint's report is indicative of the future accomplishment of ANPA research. It is as follows: "The research and development activity throughout the field of the Graphic Arts is only beginning and the ANPA research program with the support of the Association, and under the capable guidance of the Mechanical Research Committee, will continue its constructive leadership."



Engraved on Imperial Zinc

"CROSS-GRAIN"

● The term cross-grain as applied to photoengraving zinc means that the zinc sheet has been polished across or at right angles to the grain of the metal as rolled. When the direction of rolling and the direction of polishing are at right angles, the sheet is known as "cross-grain."

In practically all Imperial Zinc, both the rolling and polishing grain are in the same direction, running the long way of the sheet. This method of producing Imperial Zinc provides close grain structure which insures uniform etching and easy tooling and routing.

Imperial Zinc

A Product of

IMPERIAL TYPE METAL COMPANY

SERVING THE GRAPHIC ARTS *Exclusively*

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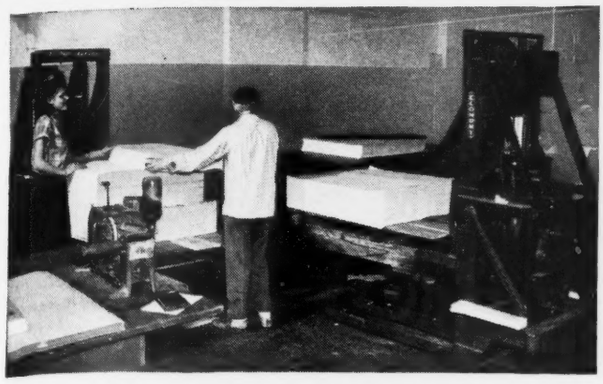

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ECONOMY ELECTRIC LIFTERS

The arms of the Economy Electric Lifter hold the paper at any height with an automatic brake. Paper can be "inched" up with electric power as each lift is transferred to cutting or sorting table. This positive control makes handling of paper easy so that bindery girls can do the work that otherwise would require a man's strength. Being portable, these Economy Electric Lifters can be moved about to serve in any part of the plant.

Economy Lifters are also very useful for handling skids or rolls of paper at loading platforms.

Write for complete specifications of this paper handling lifter. Our engineers can help with your particular problems.

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WOOD DRY MATS

First in the Field!

The craftsmanship of mat manufacture is our first concern. We devote all our energies and sincerity of purpose to that end. In each day's work, we find inspiration for further development and perfection. This spirit animates both management and mill personnel at Wood Flong. Backed by constant research and improved manufacturing, all Wood Dry Mats are made to assure you of easier handling and better printing.

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We suggest that the hundreds of users of BOOTH'S ZINK CUT CEMENT check on their supply right now. If you are low, get your order in now for this outstanding cut cement for mounting cuts and solidifying type elements for standing ads. If you have never used this famous cut cement, try it. You'll find it mounts cuts quicker and holds them tighter . . . in use all over the country by leading plants.

Prices: 75c per tube, $6.00 per dozen in the United States.

E. A. BOOTH RUBBER CO.

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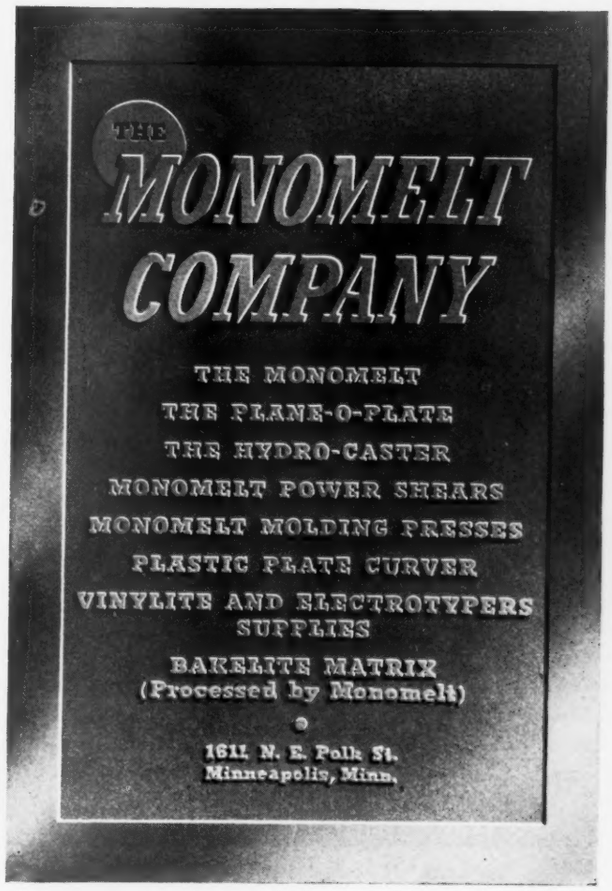

MMM Expansion

Details of a $6.5 million plant expansion program were announced recently by officials of Minnesota Mining & Mfg. Co. Most of the projects, located in 10 cities and 8 states, are already under way. Work on the others is due to begin shortly. R. P. Carlton, President, said the firm is expanding facilities at Atlanta, Ga.; Bristol, Pa.; Buffalo, N. Y.; Cleveland, O.; Lemont, Ill.; Wayne, Mich.; Boston, Mass.; and Hastings, Hutchinson and St. Paul, Mich. The company spent $47 million for expansion purposes in the five-year period ending in 1950. Construction of the projects is under the direction of C. P. Pesek, Vice President of Engineering and Properties.

Mid-Atlantic

(Continued from Page 21)

the Jersey City (N. J.) *Jersey Journal*, was co-chairman. Highlighting the session were talks on two fairly recent innovations, the Comet Linotype machine and Teletypesetter operation.

The Comet Linotype machine was described in a colored slide presentation by Edward D. Betts, New York Agency Mgr. for the Mergenthaler Linotype Co. A two magazine line machine, the Comet will produce up to 12 single-column lines a minute when equipped with Teletypesetter Operation.

The presentation led into a discussion from the floor of the Teletypesetter operation which has come into widespread use in recent years. George Paustenbach of the Tarentum (Pa.) *Valley Daily News* told his experiences with the technique and said the results have been satisfactory. Means of increasing production, hiring and training more efficient operators and mechanical questions about it were considered. The speaker stated: "We are averaging better than 375 corrected lines per hour per machine." The machines operated by Teletypesetters are equipped with 25 tooth pinions which operate the machines at an approx. speed of 7½ lines per minute. The perforators are of the standard model, equipped with the delay on the black face.

The mechanical men found themselves the butt of some friendly criticism from representatives of the newspaper advertising and editorial departments, Thomas Boland, City Editor of the Reading (Pa.) *Eagle-Times* and Fred G. Rebstock, Adv. Director, Elizabeth (N. J.) *Daily Journal*, in a panel discussion.

Both called for greater cooperation between the departments so they may combine to cut costs and offer the newspaper's readers and advertisers a constantly improving product. Failure of the composing room to adhere strictly to dummies and copy was emphasized.

Upholding the mechanical department against the criticisms offered was Peter P. Rudegeair, jr., mechanical Supt. of the Lebanon (Pa.) *Daily News*. He expressed the opinion that there is a greater need for accuracy in the editorial and ad departments if costs are to be reduced.

Social Event

At the Friday evening banquet, the executives were guests of the Reading *Eagle-Times* at a social hour, and following the dinner, Mayor John F. Davis of Reading, well-known humorist and public speaker, set the stage for an evening of entertainment. The floor-show which machine and the Drop Dot wash drawing

ROOTER FOR INDUSTRY

MILTON R. VOEKS, Art Director, Philadelphia *Inquirer*, speaking before the recent Mid-Atlantic Newspaper Mechanical Conference, Reading, Pa., discussed the quality of newspaper reproduction, especially in advertisements. Describing himself as a rooter for the photoengraving industry, he said most cases of poor reproduction are the fault of the photographer—not the engraver. "No matter how good the engraver, he must have good material to start with if good reproduction is to be expected of him," he asserted.

Better 6 Ways!
Amazing NEW
MIRACLE PLATE SCRUB
FOR COPPER, ZINC AND ZOMAG PLATES
MORE ECONOMICAL . . .
CLEANER PLATES . . .
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LESS WORK . . .
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New MIRACLE PLATE SCRUB with its fine abrasive quality and degreasing agent will tooth a plate faster, better with a minimum of effort.
Packed in handy 3 lb. dispensing cans, ready for use! Equal to approximately 20 lbs. of pumice scrubbing powder. MIRACLE eliminates usual pumice mess, stops plumbing bills due to pumice clogged sinks.
Try MIRACLE PLATE SCRUB TODAY!
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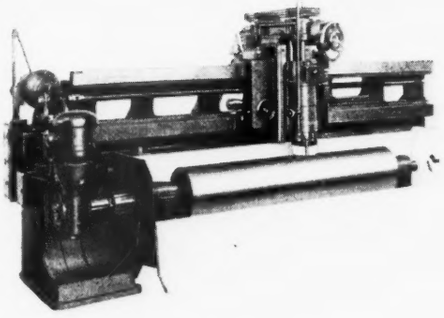

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GRINDING AND POLISHING MACHINE

Precision Built to Grind and Polish to .0003"

Manufactured in two sizes, each being able to handle varying diameters and lengths of cylinders. Special Intaglio stones, using a combined concentric and eccentric motion give a smoother surface in shorter time than obtained with other machines. Water as a coolant eliminates all dust. Precision automatic feed—either continual or at end of each traverse—compensates for stone wear while grinding. When polishing cylinders, stone is "floated" with continuous adjustable pressure, resulting in a higher finish than obtained with paper. Variable speed motors permit a choice of grinding and polishing speeds.

STANDARD PROCESS CORPORATION

Manufacturing Gravure Equipment & Supplies

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When the BUSINESS MANAGER is Happy . . .

—you can be pretty sure that the publishing mill is hitting on all cylinders . . . If there is trouble, the BM gets it, from above, below and sideways . . . Right now he is happy because a plague of stereo troubles has been ironed out—not a moment's delay since they began using Certifieds.

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

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ALWAYS ARE *WINNERS*...

Championship form is easily recognized in animals, men and machines. Printers everywhere have found the JCM Semi-Automatic Collating and Tipping machine to be a champion in the production of forms which are simplifying business operations daily.

With the JCM machine added to your bindery equipment, your printing production facilities are expanded to enable you to tap new and profitable business in the manufacture of snap-out and other one-time carbon interleaved forms. There is no form which cannot be produced on the JCM within maximum sheet limits of 17" x 25½". You owe it to yourself to get complete information on the profit potential of this machine. *Write for Catalog J-2.*

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CORPORATION

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Please send me immediately full information on the SPEED-FLEX, fastest and most modern job press for all types of form printing.

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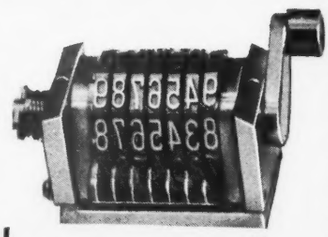
SPEED-FLEX presses are designed and sold exclusively by Orville Dutro & Son, Inc., and are manufactured in the modern facilities of Western Gear Works, Lynwood, Calif., machinery and gear manufacturers for more than 50 years. 2

ACCURATE NUMBERING AT HIGH SPEED

FORCE ROTARY NUMBERING HEAD



Send for catalog J

WM. A. FORCE & COMPANY, INCORPORATED
216 NICHOLS AVENUE BROOKLYN 8, N. Y.

The FORCE of NUMBERS

THREE QUARTERS OF A CENTURY'S SERVICE

RULE
BORDERS
LEADS · SLUGS
COMPOSING ROOM EQUIPMENT
PRINTERS' SUPPLIES
Make it a rule to get your rule, borders, leads, slugs, and supplies from Taylor-Made . . . there are NONE BETTER!
Try Taylor-Made once . . . you'll buy Taylor-Made always!
This Taylor-Made Catalog should be on your desk — may we send you one?

Taylor-Made Rule Co.
"NONE BETTER"
71 FLATBUSH AVENUE • BROOKLYN 17, N. Y.
Telephone STerling 9-6500

followed was provided through the courtesy of manufacturers and suppliers with Millard C. Pintard of the Wm. C. Herrick Ink Co. serving as chairman of the entertainment committee.

Stereo-Press Meeting

Four types of Goss printing presses, all for the intermediate sized newspapers and all designed with the safety of the pressman in mind, were discussed by Frank A. Kopp, sales representative of the Goss Printing Press Co., at the joint Press-Stereotype session on Saturday morning. A colored slide presentation demonstrated the features of each of the presses.

Pressroom Cooperation with the Newsprint Suppliers was the subject of a talk by Robert B. Lewis, representative of the International Paper Sales Co., Inc. A talk with local suppliers as to the picture in the newspaper's immediate area was suggested. "If we all work together on this supply-use problem, we cannot help but produce results which will add up to a sizeable contribution to the solution of our mutual problems," Lewis said.

Several suggestions were offered for reducing newsprint waste in the pressroom, and Lewis added that the handling of rolls in unloading operations is one of the prime causes of "small losses, which, if added together, would go a long way toward cutting white waste figures."

S. D. Willey, Mechanical Supt. of the New York *Daily News*, briefly described his experiences with the Cooksey System of Web Control. Used with the Headliner presses, Willey said 80 million impressions have been produced without a failure.

"Every publisher in the medium-sized field should seriously consider the use of color," said Leo J. Carle, Mechanical Supt. of the Erie (Pa.) *Dispatch*. He pointed out that his paper has been using four-colors for about a year and during the time has picked up not only national advertisers, but also many local ones.

The press-stereotype session was directed by Rudolph Kuhner, Press Supt. of the Sharon (Pa.) *Herald*, and John A. Lohan, Stereotype Supt. of the Philadelphia *Bulletin*, served as co-chairman, Mr. Lohan spoke of his paper's success with plastic blankets, which brought a flurry of questions, comments and arguments from the floor.

Panel members included Keith Wesley of the Phoenixville (Pa.) *Daily Republican*; John S. Stinson, Pressroom Supt. of the Johnstown (Pa.) *Tribune*, and Harold Eich, Press-Stereotype Dept. of the Meadville (Pa.) *Tribune*.

Engravers' Session

Photographers and photoengravers heard descriptions of the Dynajet etching

Boston Craftsmen Prepare for Convention—Boston Craftsmen with plants actually located on the site of the original Boston Tea Party look over commemorative plaque that will be one of the major points of interest to visiting Craftsmen and their families at the 32nd Annual Convention of the Intl. Assoc. of Printing House Craftsmen, August 19-22. Shown from left to right are: Kilby Smith, Lincoln & Smith Press; Joseph Warren, Warren Bros., Inc.; and Arthur MacKenzie, Union Bookbinding Co., all of Boston.

MECHANICAL AND CHEMICAL CONSULTING
SPECIAL PRESS AND EQUIPMENT DESIGN
DEVELOPMENT ENGINEERING

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323 West Gorham Street • Madison 3, Wis.

Mechanical Executives

are invited by the Editor to submit informally in a letter details about any mechanical, process or production helps devised in their plants. Our readers will appreciate your willingness to pass along the know-how.

TYPE METAL REMELTING FURNACES

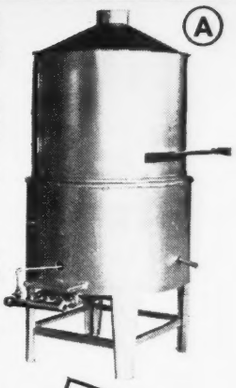
(A) 'Surface' Type Metal Remelting Furnace equipped with Atmospheric Burner and hood. Available in capacities up to 2500 pounds of metal.

(B) 'Surface' Type Metal Remelting Furnace equipped with Pressure Burner. Available in capacities up to 3200 pounds of metal.

(C) Furnace equipped with atmospheric burner and bottom outlet.

(All types can be equipped with hood)

'Surface' Gas-Fired Furnaces for type metal remelting are designed to provide the industry with an efficient, rapid remelting furnace of long life.



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'Surface' *Standard Rated* FURNACES

SURFACE COMBUSTION CORPORATION, TOLEDO 1, OHIO

"REGAL" MONOCORK

by

New England

This Press Blanket is by far superior to any cork packing that has ever been available to the industry!

We make this claim with no fear of contradiction. Its perfection is attested to by the fact that we have difficulty in keeping up with the demand.

No matter what your reason may be for not having these blankets on your machine, the simple truth is that you are denying yourself the best. Once you learn what "REGAL" has to offer, you too will be a constant repeat user.

YOU BE THE JUDGE!

NEW ENGLAND FIBRE BLANKET COMPANY

164 FREMONT STREET
WORCESTER MASSACHUSETTS
BRANCHES: New York—Chicago—San Francisco—Tulsa

UP Output.... CUT Costs.... and "WIN the Peace"

CALLING...ALL OLD MODELS
Calling *In* All Old Models

Calling the 13,000 owners of old model BAUMFOLDERS (purchased prior to 1940) . . . to exchange them for the modern models . . . from the amazing NEW "Junior Jets" (14x20 and 17x22) to the most versatile Folder ever designed . . . (15 folding sections . . . more than any other Folder ever built) . . . 30x46 . . . 60 . . . BAUMFOLDER.

Of course, your old Model BAUMFOLDER is undoubtedly giving you good folding and isn't worn out . . . BUT, to cut operating costs to the bone . . . to increase folding profits to the "tree-tops", investigate the greater production, greater versatility and latest time-saving features of the MODERN MODELS.

Even if you have long since written the investment off your books . . . and even though your BAUMFOLDER has paid for itself many times over, we invite you to allow us to surprise you by the high price at which we will buy it back . . . AND the LOW price of the Modern Miracle, Many-Purpose, Many-Profit Automatics . . . No cash involved . . . just MODERNIZE and pay part of the greater profit . . . from this point on.

If you knew all the FACTS, we are SURE you would WANT to.

RUSSELL ERNEST BAUM, INC.
615 CHESTNUT STREET • PHILADELPHIA 6, PA.

UP Output.... CUT Costs.... and "WIN the Peace"

NO SMUDGING thanks to WETTER ENGINEERING SKILL

WETTER-designed means complete freedom from smudging. Precision parts, engineering know-how guarantees perfectly clear numbering impressions . . . no matter what the job. Wetter takes any speed, any stock, any run in its stride.

Bring your numbering problems to WETTER. Our Engineering Department will go to work on them; offer a practical, economical solution. Further information upon request.

7572

Number it Better with a Wetter

WETTER NUMBERING MACHINE CO.
ATLANTIC AVENUE & LOGAN STREET • BROOKLYN 8, N. Y.
SOLD BY ALL DEALERS AND BRANCHES OF A. T. F., INC.

The ELROD produces leads, slugs, rules and base of the highest quality
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NEWSPAPER & PRINTING PLANT ENGINEERING
NEW BUILDINGS • MODERNIZATION
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WEB DRYING APPARATUS
for ROTOGRAVURE • WEB-OFFSET • ANALINE LETTERPRESS
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process by company representatives and also received the Fairchild Scan-a-graver outlook for 1951 at the final business session of the Conference Saturday afternoon. R. Wayne Schott, Manager of the Conemaugh Engraving Co., Johnstown, Pa., and Walter Metz, Engraving Dept. of the Harrisburg (Pa.) *Patriot-News*, served as co-chairman of the session.

The Dynajet etcher, latest development of the U. S. Stoneware Co., was explained by Representative Stanley B. Craig, who said the development's basic principle is agitation of the bath solution by the diffusion of air into the etching tank. Agitation of the solution, with air being picked up during the agitation, greatly speeds the corrosion or etching process.

The Fairchild Scan-a-graver was discussed by a company representative, C. A. O'Brien, who said many improvements and modifications have been made since installation of the first production machines in 1949. He reported there are presently more than 500 installations of the machines in 46 states and Canada.

Although the majority of the installations print directly from the plates, O'Brien stated, it has recently been proved that the plates can be successfully matted. There was a surge of interest in the engraver last year by large papers which use it on a stand-by basis to supplement their regular engraving departments in last-minute efforts, he continued, and by smaller papers who have found it an effective way to print more pictures more economically than they could with regular methods.

The panel discussion consisted of a number of technical questions put to the audience and the panel speakers, who were Milton R. Voeks, Art Director of the Philadelphia *Inquirer*; Leighton Hacker of the Norristown (Pa.) *Times-Herald;* and Jules L. Plangere, Engraving Supt. of the Asbury Park (N. J.) *Press*.

Wins Ayer Award

The Daily News-Tribune of LaSalle-Peru-Oglesby, Ill., received the F. Wayland Ayer Cup for excellence in typography, presswork and makeup in competition with more than 800 of the nation's top newspapers. The *News-Tribune* is in the 50 thousand or greater circulation class. Second Honorable Mention went to the *Christian Science Monitor* and Third Honorable Mention to the Louisville (Ky.) *Courier-Journal*. The New York *Herald Tribune*, since 1931, has retired two cups. The New York *Times* already has won two legs on the present award. Frederick Miller is General Mgr. of the *News-Tribune*. John Barron (well known to ANPA Mechanical executives) is Mechanical Supt. Judges in the contest were: Harold E. Stassen, President of the University of Pennsylvania; Merle Armitage, Art Director of *Look* and *Quick* magazines and President of the American Institute of Graphic Arts, and J. L. Frazier, Editor of the *Inland Printer*.

ATF Produces Tank Gun—American Type Founders is now manufacturing the 76 mm. gun which will arm the new General Walker Bulldog 25 T. tank. Shown from left to right at the ceremonies marking delivery of the first gun to the Army are: Thomas Roy Jones, President of Daystrom, Inc., ATF parent company; Edward G. Williams, President of American Type Founders; Maj. Gen. A. B. Quinton, Special Assistant to the Chief of Ordnance; Col. H. N. Rising, Commanding Officer, Watervliet (N. Y.) Arsenal; and Hon. Alfred E. Driscoll, Governor of New Jersey.

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Manufactured by the largest producer of proof presses and other pre-press equipment for letterpress, offset and gravure. *Write for a catalog.*
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VANDERCOOK PRE-PRESS ...CUTS COSTS!

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EXTENSION DELIVERIES
for MIEHLE, BABCOCK, PREMIER and other presses
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AUTOMATIC PAPER LIFTS
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Special purpose equipment for the Graphic Arts Industry
CONSULT US ON YOUR PARTICULAR PROBLEM
THE RATHBUN & BIRD COMPANY, INC.
DESIGNERS AND MANUFACTURERS • FOUNDED 1898
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ALL CLASSIFICATIONS

$.75 per line 1 9/16" wide. Minimum ad 5 lines, 29 characters per line. Cash with order.

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We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer, 1276 West 3rd Street, Cleveland 13, Ohio.

GRAPHIC ARTS SALES ENGINEER

wanted by nationally known manufacturer to do technical service work. Headquarters in the Midwest. Age 27 to 35. Experience in graphic arts industry—lithography or letter press field, preferably with a technical background. Must be able to pass health examination. In reply give present and past employment and complete history which will be retained confidentially and later returned if desired. If convenient attach recent photograph. Write Box 465.

FOR SALE

Scott Rotary Press, single width three units, 24 pages. Completely reconditioned now erected, new motor drive, 30 chases, Mat roller, stereotype equipment. Becker-Compton, Jackson, Miss.

BUSINESS FOR SALE

Printery in wealthy California city needs high-caliber manager. Owner retiring. New Intertype C-4, quadder; clean plant. Sales volume climbing. Write Box 467.

EMPLOYMENT

Composing room foremen and other mechanical executives desiring positions in Pennsylvania may register without charge with Pennsylvania Newspapers Publisher's Association, 209 Telegraph Building, Harrisburg, Penna.

FOR SALE

Hoe Press, Pancoast type, 12 cylinder, 21 1/2" cut off, two formers and 2 motors D.C. drive. Maximum capacity 24 pages in 4 colors on each page or 48 pages in one printing. This press is in excellent condition. Stereotype equipment, Cutler Hammer conveyor and Paper Hoist for same is available. Reply Box 466.

WANTED

Rewinder with slitter attachment to wind stub rolls 15" to 70", 36" in diameter. Write Box 464. Printing Equipment *Engineer*.

Ask PRINTING EQUIPMENT *Engineer* to help find it!

HOE DOUBLE SEXTUPLE PRESS

6 Units and 2 Folders Cutoff 22¾"

2 100 HP AC Motor Drives

CONVEYORS . . . RUBBER ROLLERS . . . INK PUMPS

AUTO WEB TENSION

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ELECTRICAL EQUIPMENT

Unit Press Drives . . . Reels . . . Automatic Tensions . . . Speed Pasters provide safety and reliability with economy. Whether large or small . . . letterpress or offset . . . your press-room can rely on Cline-Westinghouse Electrical Equipment.

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Since 1936 — *For Mounting* — Since 1936

CUTS. .STEREOTYPES...ELECTROTYPES

65c per tube-$5.50 per doz. $5.00 per doz. in two doz. lots, $4 50 per doz. in gross lots.

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45 Malone Avenue, BELLEVILLE 9, N.J.

The **MELTEVATOR**

. . . a New Automatic Melting Pot Loader

Supplied with or without furnace

SAVES TIME

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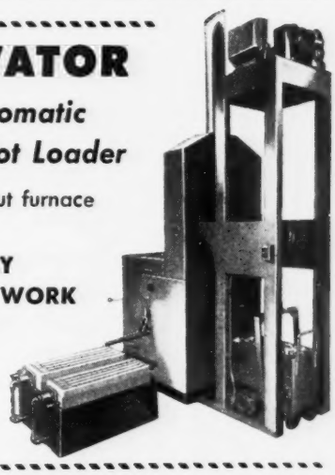
SAVES WORK

Write for Details



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COMPLETE PLANTS EQUIPPED LARGE OR SMALL

OFFSET PRESSES • BINDERY EQUIPMENT

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Fifth District Conference

The annual conference of the Fifth District of the Intl. Assoc. of Printing House Craftsmen will be held at the Claypool Hotel, Indianapolis, June 15 and 16. The business session is scheduled

Robert J. Heuslein, Chairman of the Fifth District Craftsmen's Conference to be held in Indianapolis on June 15 and 16.

for Saturday morning and Robert D. Beckman, Assistant to Director of Public Relations, Allison Div. of General Motors Corp., will speak at the noon luncheon on *Turbine Transports of Tomorrow*. New developments in the Graphic Arts will be discussed at a technical session on Saturday afternoon by representatives of the 14 clubs in the Fifth District. A banquet and entertainment in the evening will close the conference. President of the Fifth District is Joe Clendennin, Indianapolis Blue Print & Lithograph Co., and Conference Chairman is Robert J. Heuslein of Indianapolis.

"The Plate's the Thing"

Fourteen of eighteen sustaining members of Printing Plates Research, Inc., held their annual meeting at Hotel Cleveland, Cleveland, on Wednesday, April 4. Company representatives together with the directors expressed themselves as being gratified with the research results. A wholly new concept of preparing plates for letterpress printing was discussed. It was the consensus of the meeting that "the plate's the thing." This consensus was arrived at in view of the progress which has been made recently in improving plate reproduction together with new techniques. These improvements have been developed at Battelle Memorial Institute in collaboration with sustaining members of Printing Plates Research, Inc.

All officers were re-elected for the new year as follows:

President, Joseph Schwartz, Westcott & Thomson, Inc., Philadelphia.

First Vice President, Robert Myers, Capital City Printing Plate Co., Des Moines, Ia.

Second Vice President, S. R. MacElreath, Sam Ross MacElreath Co., Dallas, Tex.

Secretary-Treasurer, Ray Kreber, Van Bolt-Kreber Electrotype Co., Inc., Columbus, O.

J. Homer Winkler, Technical Advisor, Battelle Memorial Institute, Columbus, was reappointed manager.

Salesman's Guild

The Intl. Printers Supply Salesmen's Guild has announced the following officers and directors: President, Carlton Mellick, Chicago; Vice President, Norman L. Rowe, New York; Secretary, Myron F. Lewis, Chicago; Treasurer, Alfred S. Walden, New York; Representative at Large, Lester A. Neumann, Chicago. The Directors for Boston are Frank Garrity and Carl Nelson; Chicago, William J. McWilliams and W. Lincoln Noelle; Detroit, Richard G. Manley and Harold H. Shierk; New York, Malcolm O. Brewer and Malcomb S. Burroughs. The next annual meeting of the Guild will be held in Boston during the week of August 20.

MUST BE SEASONED

SEVERAL stereotype executives, at the recent Mid-Atlantic Mechanical Conference in Reading, Pa., said they had used the much-discussed stereotype plastic molding blanket and had had no success with it. C. M. Flint, ANPA Research Director, advised those shops already experimenting with the plastic blanket to keep on trying. He said opposition to the blankets is not different from the objections raised when the change from wet to dry mats was begun. He added that the ANPA has determined that the blankets must be kept in storage for at least five or six weeks after manufacture before they can be used with success.

Miehle's Denver Agent

The W. S. Megill Co. has been appointed authorized agent for service and parts for the Miehle Printing Press & Mfg. Co. in the Denver, Colo., area. According to Carlton Mellick, Miehle Vice President, the Megill organization will provide service for western Kansas, western Nebraska, Wyoming, Colorado, New Mexico, and El Paso, Tex.

S & M Moves Quarters

The S & M Mfg. Co. has moved to larger quarters at 4100 Sunset Blvd., Los Angeles 29, Calif. The company was formerly located at 5000 W. Jefferson Blvd.

Heidelberg Moves

Heidelberg Eastern Sales Co. has moved to 45-45 39th St., Long Island City, Queens, N. Y. The Heidelberg company also announced the acquisition of the physical assets of Super Speed Printing Press Co., Inc.

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May 1951

P. E. E. REPRESENTATIVES

WILLIAM L. OSBORN, Eastern Manager, 1712 Grand Central Terminal, New York 17, N. Y. Phone MUrray Hill 6-5980.

EUGENE A. POWERS, Midwest Manager, 612 N. Michigan Ave., Chicago 11, Ill. Phone: SUperior 7-2444.

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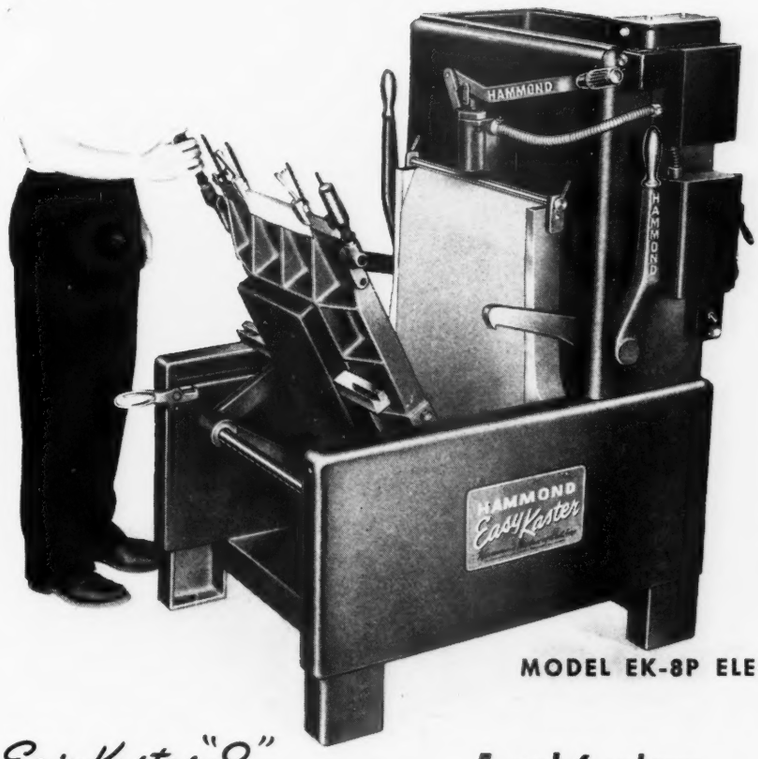
Many of our production executive readers will respond to your Position Wanted Ad in the Classified Section of *Printing Equipment Engineer*. Rates on p. 55.

STEP UP and CAST FAST WITH A HAMMOND *EasyKaster* "8"



MODEL EK-8P ELECTRIC

HAMMOND *EasyKaster* "8"

- Gas or Electric 800 lb. capacity valve controlled melting pot.
- Automatic Metal Temperature Control.
- Automatic and Balanced 4-point lock-up.
- Easy Operation—bed *rolls* into place.
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Gas or Electric 400 lb. Capacity Melting Pot.

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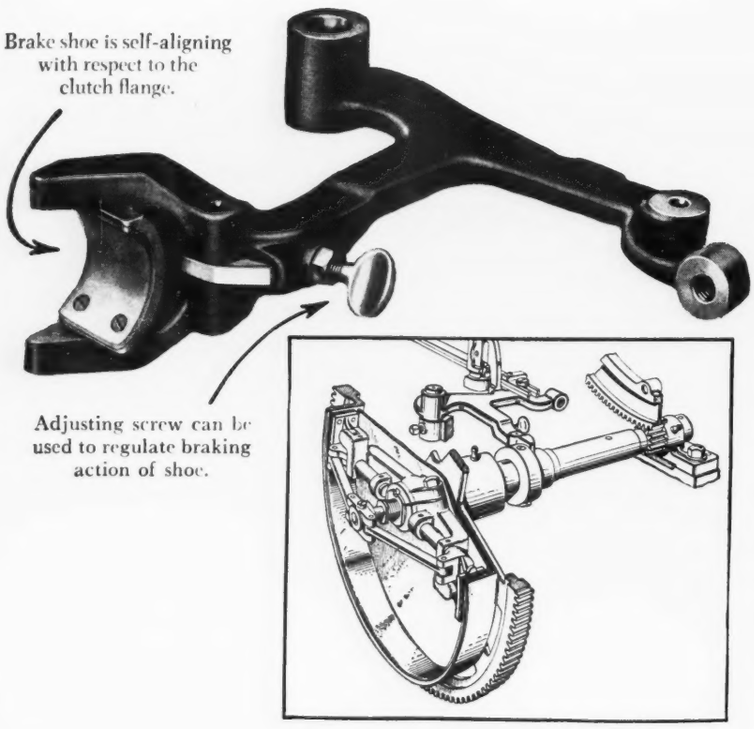
Again!...Intertype steps ahead with two important improvements

THESE TWO NEW DEVICES are typical Intertype® developments that help improve quality of your composition and increase your composing room efficiency through the elimination of lost time. There are scores of others . . . all leading toward more profitable operation


Brake shoe is self-aligning with respect to the clutch flange.
Adjusting screw can be used to regulate braking action of shoe.

NEW FORKED LEVER for instant, automatic stops

Here's a new Intertype device that insures safer operation, reduces maintenance and eases the operator's task. This new automatic Forked Lever not only stops the machine instantly and accurately, but does it positively no matter how old the machine is. There's no worry about rebound or overthrow caused by worn parts. That's because a new self-aligning brake shoe is built right into the lever, stopping the cams smoothly at any point in the cycle. This new Forked Lever can be applied to outstanding Intertype line composing machines *(Part S-795)*.

NEW KNIFE WIPER for cleaner slugs

This new style Knife Wiper does a two-fold job. (1) It removes metal chips efficiently because the wiper bar is in direct contact with the knives on every stroke. That means cleaner slugs. (2) New rigid gib design also reduces costly maintenance. The Knife Wiper can easily be installed on outstanding Intertype machines *(Part U-5533)*.

Look to Progressive INTERTYPE

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